

# A GUIDE TO USING ARTIFICIAL INTELLIGENCE IN EDUCATION



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# 1

## INTRODUCTION

Artificial intelligence (AI) technologies have spread rapidly across different areas of society, including education. Almost without us realising it, our teenage students, and even many teachers, have begun to use tools like ChatGPT as a matter of course. Using this type of technology is simple: it can be tried free of charge without having to install anything and has a small learning curve, since prompts are given through conversation. However, its darker aspects remain more hidden: AI tools have a high energy, environmental and economic cost, are controlled by just a few large corporations, can spread erroneous beliefs and can be used for inappropriate purposes.

As with all other technologies, we should think deeply about how to use these resources, analysing the opportunities and risks they pose and making decisions about the ethical dilemmas they create. Experts in the field of education have also begun to investigate their positive and negative impacts; however, this type of technology is currently changing so rapidly that there is still much to research, reflect on and experiment with.

This guide, therefore, has a twofold objective:

- To help readers think deeply about these technologies.
- To offer clear guidelines regarding the use of AI in education.

## LIMITATIONS OF THE GUIDE IN TERMS OF USERS

This guide is aimed at helping **teachers working at all stages and in all areas of education**. Our objective is to foster a responsible and ethical use of AI, rooted in solid pedagogical foundations.

**Regarding use by students**, it is essential to establish educational stage-appropriate guidelines, bearing in mind that many students already use chatbots, albeit often covertly. This poses new challenges and opportunities: how can I avoid inappropriate use? What does the law say? And, if I do decide to use it, how can I take advantage of it while at the same time using it both responsibly and ethically?

The guide aims to respond to the current situation, taking into account the limitations, doubts and ethical dilemmas generated by this type of technology. **Teachers should therefore be cautious when opting to use these technologies**, as the tools at our disposal are far from neutral. And although this is clear, there are situations in which simply banning them may not be the best option; one example, for instance, would be secondary school, if students are already using them to do their homework. Indeed, these resources are widespread in both educational and professional settings, and in many places where they have been banned, many students and workers have begun to use them clandestinely, either taking advantage of the benefits they offer or taking risks. Given this situation, it is better to research the use that can be made of AI and decide how to proceed both in the classroom and in relation to homework. Furthermore, we should also take into account the fact that, in recent years, these tools have had a significant impact on education, an impact that is likely to become even more intense in the medium to long term.

Furthermore, each tool has a clearly defined minimum age for users, and the European General Data Protection Regulation (GDPR, 2016<sup>1</sup>) also clearly establishes its own limit: chatbots should not be used by anyone under 13 years of age. For students aged 14 to 18, if the decision is made to use this type of tool, we recommend doing so without registering, as otherwise, students would need the consent of their parents or legal guardians. Moreover, the terms of use for each individual technology must be reviewed one by one, as in some cases, they cannot be used until the age of 18 (e.g., Anthropic's Claude chatbot and Google's NotebookLM tool). Details of the different laws are provided in Appendix II.

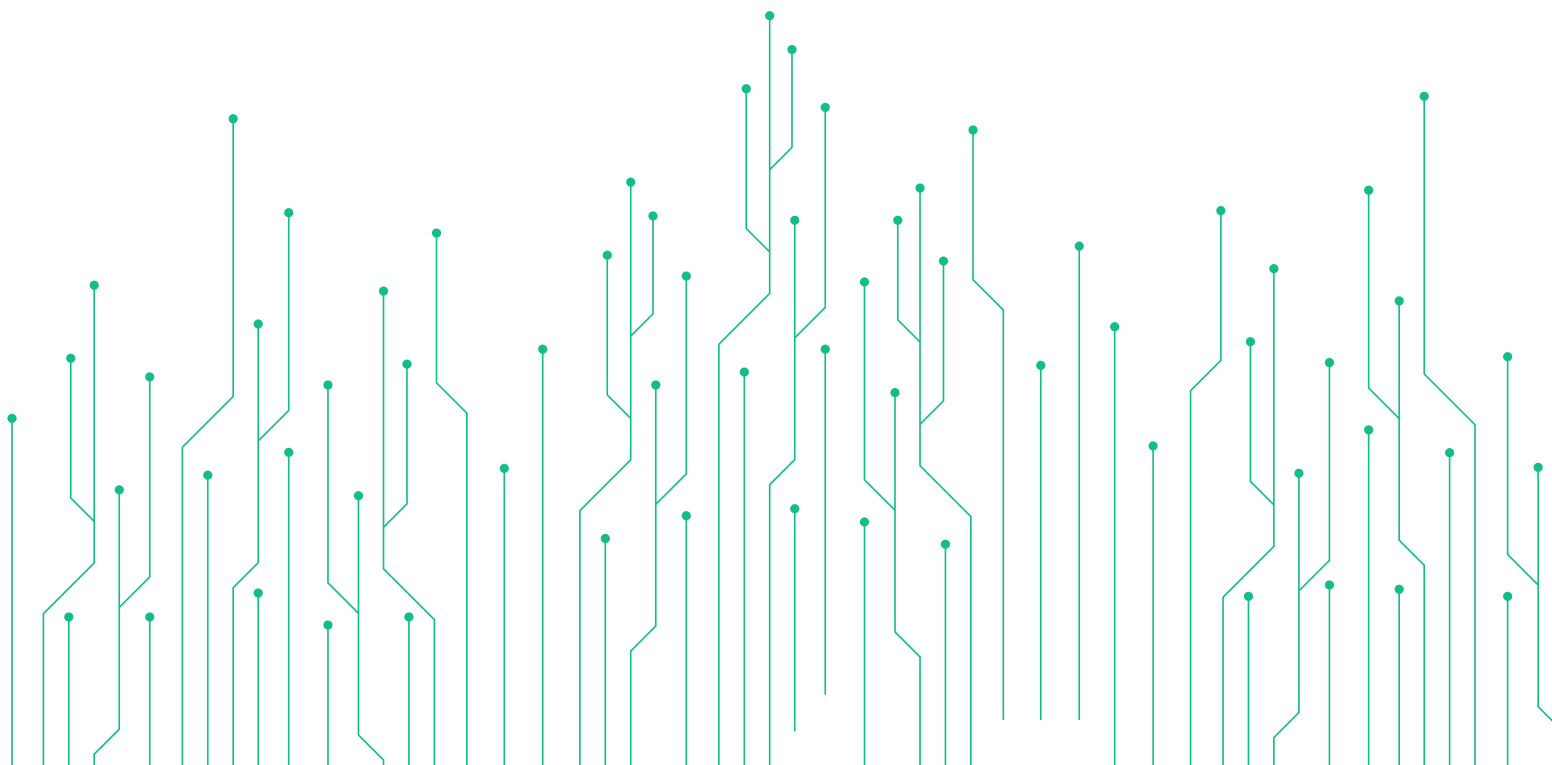
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1 <https://eur-lex.europa.eu/legal-content/ES/TXT/?uri=celex%3A32016R0679>

That said, the recommendations for using chatbots are:

- **In Preschool and Primary School:** **only teachers** should use them to help with their work; students should not use them.
- **In Secondary School:** teachers may use them as an aid; also, from year 3 of Compulsory Secondary Education onwards, students may use them also **but only when such use is deemed necessary and always under strict supervision** (it should be remembered that many students at that age use them on their own anyway). Once the school has reached an agreement regarding how to proceed in relation to AI, and providing the decision made is to use it also with students, teachers must be informed clearly and precisely of exactly when, how, where and for what purposes they can use it. It is important to foster thoughtful and critical use of technological tools and to ensure a good understanding of their benefits and limitations.

The aim of this step-by-step approach is to help students develop mature and ethical criteria regarding the use of AI, taking into account each one's level of development at each stage, along with the educational objectives of the lesson and the competencies being developed.

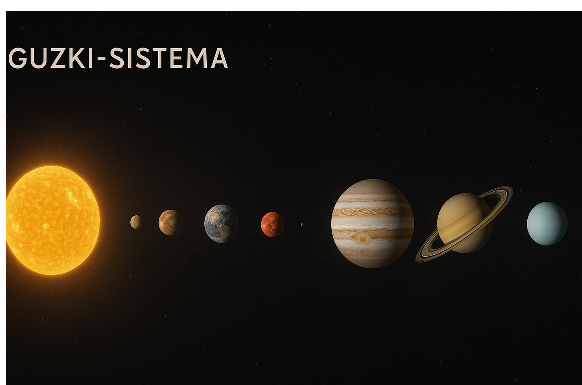


## LIMITS OF THE GUIDE IN TERMS OF THE SELECTED TECHNOLOGIES

Given the growing diversity of AI technologies, we will focus specifically on text generators, which are currently the most widely used and useful tools in the pedagogical field (ChatGPT, Gemini, Copilot, etc.)<sup>2</sup>.

AI generators can also create images, videos and programmes, although they still fall somewhat short of meeting teachers' needs. We run the risk of wasting a lot of time and not achieving the desired result, especially if we use free versions and do not want to delve too deeply into them. As for images, they can be inspiring, but they may contain precision errors, as shown in the examples below:

'Draw the solar system to scale'  
(ChatGPT 40, 28/03/2025)



'Generate an image of the map of the Basque Country'  
(ChatGPT 40, 26/11/2024)



There are numerous ethical and legal challenges involved with these new image generation tools, including the automated use of artists' styles, copyright, the ease with which deepfakes can be generated and digital image manipulation. Like with text, the ways in which images are generated are also changing, making the development of appropriate ethical and legal frameworks a matter of the utmost urgency.

Therefore, as we said earlier, in this guide we will focus solely on chatbot text generation.

To begin to explore this issue in depth, we first recommend that teachers think about it by themselves and then share their opinions with their colleagues. There is a tool to help you do this, as well as a small glossary, in the appendixes.

<sup>2</sup> The more accurate technical term would be *generative artificial intelligence* or *Large Language Models (LLM)*, but, for simplicity, in this guide we will use the term chatbot. Please bear in mind that although, until recently, chatbots were only used to ask questions and obtain answers, today they are also capable of performing more complex tasks.



## 2

# POSITION AND PRINCIPLES OF THE EDUCATION DEPARTMENT OF THE AUTONOMOUS COMMUNITY OF THE BASQUE COUNTRY

## 2.1. POSITION OF THE EDUCATION DEPARTMENT

Artificial intelligence is a disruptive technology that is causing profound changes in different areas of society. In the field of education, it offers enormous opportunities to enrich the teaching-learning process and make innovative contributions to both teaching and student training. Therefore, and taking into account the ethical and practical challenges posed by artificial intelligence, in this guide, the Education Department establishes its official position based on UNESCO recommendations, scientific evidence and democratic values.

Protecting the dignity and autonomy of all individuals, ensuring respect for data confidentiality and privacy and providing equal opportunities and accessibility to AI tools are some of the Department's principal commitments. Furthermore, we prioritise the common interest of the entire education system, always striving to



provide a sustainable response to the challenges facing society today. Our goal is, firstly, to ensure that the use of AI is not guided exclusively by people's innate fascination with new technology and, secondly, to ensure that AI responds to the real needs of education with responsibility, critical thinking and fairness.

This document outlines the specific responsibilities assumed by the Education Department, including transparency, professional ethics, data protection and environmental sustainability as fundamental pillars to be taken into account in all applications linked to the integration of AI tools.

As part of its effort to ensure continuous innovation, the Education Department will establish appropriate dynamics and procedures to monitor, evaluate and improve the use of AI. When compiling this guide, and in response to new concerns, suggestions and needs that arise in daily practice, we have relied on international legislation and recommendations. The aim is to enable the entire educational community to use these digital tools responsibly, based on human dignity and promoting students' holistic growth.

Below, we outline four principles for using AI. The idea is for them to serve as a basis for users when they are trying to decide what to do in relation to AI use.

## **2.2. 'STUDENT GROWTH AT THE CENTRE'**

We will only use artificial intelligence if it fosters students' personal and academic growth. We will use it pedagogically, taking into account both the teachers' knowledge and experience and methodologies based on scientific evidence.

For example: summarising written texts is one of the most effective learning strategies. Therefore, although AI is perfectly capable of summarising texts, this option will never replace the benefit students gain from doing the exercise themselves. However, an AI-generated summary may be used, for instance, to help A-level students (aged 17-18) understand a high-level scientific journal paper.

## **2.3. 'USE AI TO FOSTER GREATER COHESION IN EDUCATIONAL COMMUNITIES AND NEVER TO REPLACE FACE-TO-FACE RELATIONSHIPS'**

Artificial Intelligence should be used to strengthen a sense of community in schools, consistently with each one's mission and specific context.

We all know that face-to-face relationships are more meaningful than screen-based interactions<sup>3</sup> and that handwriting has cognitive benefits in the learning process<sup>4</sup>. We must therefore take care to prevent our fascination with a new technology from undermining human cohesion within our schools, hampering students' social-emotional development and reducing collaborative learning. In schools, students must continue to learn to live together, share experiences and resources, help each other, accept inequalities and manage conflicts.

Therefore, AI should never replace direct personal interactions, although it may be useful in situations in which, for example, face-to-face interaction is not possible. Furthermore, AI can also be used to facilitate and streamline some of teachers' routine tasks, freeing up more time for them to spend with students.

## 2.4. 'HUMAN IN THE LOOP'

To integrate artificial intelligence ethically and responsibly, it is always necessary to have someone supervising the critical steps and the final outcome of the process, a concept often referred to as 'Human in the loop'. This not only guarantees ethical, legal and critical considerations, but also contributes to improving the quality of the outcome.

We therefore propose that AI assume the role of *co-pilot*, with a human in *the driving seat*. Responsibility for the outcome will always lie with the human, even if they state that they have used AI tools. Ultimately, it is about using these technologies as a *tool*, not as an *oracle*; it is about the user assuming responsibility for ensuring the correctness of the results.

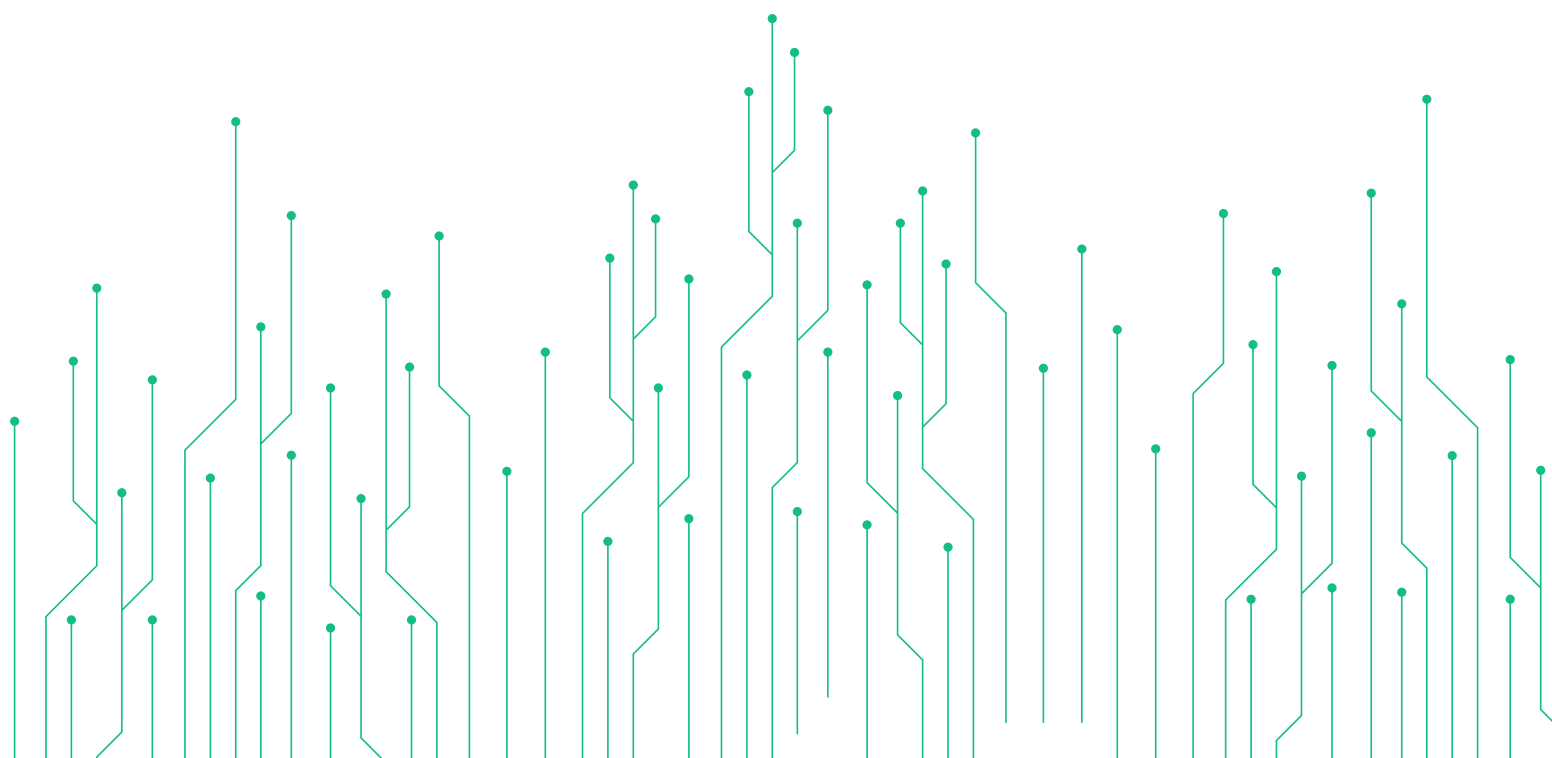
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3 Kroencke, L., Harari, G. M., Back, M. D., & Wagner, J. (2023). Well-being in social interactions: Examining personality-situation dynamics in face-to-face and computer-mediated communication. *Journal of Personality and Social Psychology*, 124(2), 437–460. <https://doi.org/10.1037/pspp0000422>

4 Karin H. James & Laura K. Engelhardt (2012). The Importance of Cursive Handwriting Over Typewriting for Learning in the Classroom: A High-Density EEG Study of 12–14-Year-Old Children' *Frontiers in Psychology*. <https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2020.01810/full>

## 2.5. 'SUSTAINABILITY AS A KEY'

Currently, AI technologies consume huge amounts of energy, water and minerals. Water, for example, is used in data centre cooling systems to keep computer servers at a suitable temperature. Minerals, including several rare metals, are essential raw materials in the production of electronic devices (chips, batteries, etc.). These technologies must be used consciously and sparingly, limiting usage time as much as possible and never letting them encroach on non-technological activities.





# 3

## HOW ARTIFICIAL INTELLIGENCE WORKS

Currently, AI is used in many different fields and is increasingly present in education. As teachers, it is important for us to understand the basic functioning underlying these tools so that we can use them rationally and effectively.

### What is generative artificial intelligence?

The term generative AI refers to systems capable of creating or adapting new content. They include tools for generating text, images, audio files, videos and programming code. They learn from large data sets and generate results based on prompts.

### How do AI tools learn?

**Huge data sets** taken from the Internet and other public sources (websites, books, articles, forum posts, social media, etc.) are required to train AI models. Upon processing this data, the models identify and learn patterns, which are then used to respond to prompts.

It should be noted that the data sets used to train models are not always filtered or selected in a controlled manner. This means that in addition to receiving correct and useful information, the models also internalise any errors, biases or stereotypes that may be present in the data, despite the different techniques that are subsequently used to try to correct them. Therefore, when using AI models, it is important to remember that **the results may not always be accurate or correct**. Furthermore, if we send the same prompt more than once, the tool may give us a different answer each time, even if the exact same wording is used.

### How do AI tools respond?

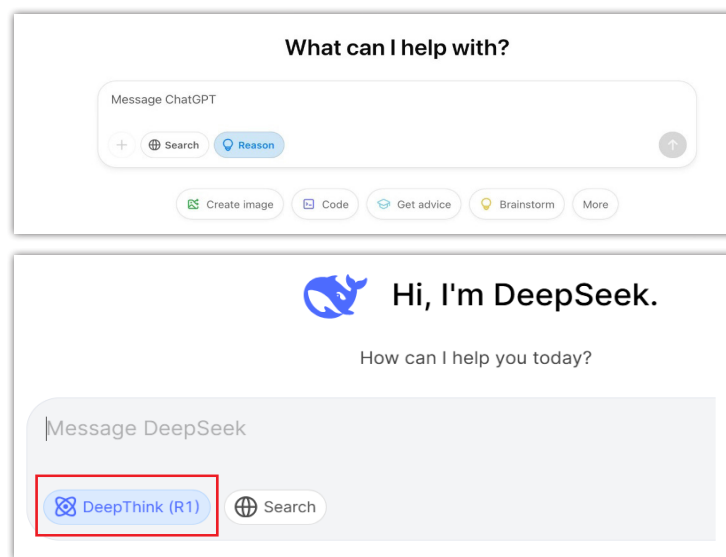
AI tools lack any real **understanding or awareness**. They provide answers based on statistical patterns and probabilities. In other words, in light of what they have learned previously, they choose **the most likely next word part** (*token*).

For example, if we ask: 'what colour is the sky?', the model will likely answer 'blue', because that is the response with the highest probability rating. However, if we ask it about a more specific topic—for example, a street in a small town—it may give us the wrong answer or no answer at all, because it has received much less information about that specific question.

### Reasoning Models: what they are, how they work, and what they can be used for

Some AI models take more time to *think* and are called *reasoning models*. Due to their longer internal process, they offer stronger or deeper answers. In other words, they follow a series of mental steps or lines of reasoning to answer a question or problem, just as humans would, but always on the basis of statistically learned patterns.

Chatbots that offer a reasoning model option usually have a button you need to click on to activate it. Two examples are shown on the screens below: 'Reason' in ChatGPT and 'Deepthink (R1)' in DeepSeek.



## What can they be used for?

- **To encourage slow reasoning:** For example, to ask for problems to be solved step by step in maths or science. This enables teachers to monitor more easily whether or not the method used is correct.
- **To simulate in-depth debates:** Reasoning models can provide long lines of reasoning on a complex topic, allowing for reflection and comparison.
- **To analyse mistakes:** By examining how the model *presents* an example, you can identify with students which parts of the answer are correct and which are incorrect.
- **To moderate creativity:** Since these models enable you to prompt results with a greater or lesser degree of creativity, *slower* approaches sometimes provide more accurate results.

But be careful! Reasoning models are not always the best option. If you just want to generate simple texts in Basque, sometimes a normal model will provide a higher-quality result; furthermore, in terms of sustainability, normal models consume less energy. We do not, therefore, recommend opting for the reasoning model in all prompts.

## ‘Deep Research’ tools for research


Recently, several specialised ‘Deep Research’ chatbots have emerged to assist with research. Tools such as OpenAI (subscription-based), Google (free) and Perplexity (free), among others, perform in-depth searches based on multiple sources and can prepare a 5-20 page report in about 5-20 minutes. In response

to a user-prompted question or topic, they consult a series of scientific papers, websites and databases and then synthesise and structure the information.


Since they can provide a basis for clarification or a broad overview of the main ideas, they may be useful for teachers, although the final report should always be critically reviewed by a human.


Even though they can be very useful for researching a given topic, **it is important to remember the second principle outlined in this guide: these tools should never replace our relationships with other colleagues and experts**; they should be used as support tools only.

Below is an example: <https://gemini.google/overview/deep-research/>



How should I teach maths to a 10-year-old student with dyscalculia? Summarise what the latest research says






Esta información tiene un carácter meramente informativo. Para obtener asesoramiento o diagnóstico médicos, consulta a un profesional.

I've put together a research plan. If you need to update it in any way, let me know.

**Teaching Math to Dyscalculia**



Research Websites

- (1) Define dyscalculia, its common characteristics, and how it specifically impacts mathematical learning in 10-year-old students.
- (2) Identify the core principles and evidence-based pedagogical approaches recommended by current research for teaching mathematics to students with dyscalculia.

## Do these tools work well in minority languages, such as Basque?

The most widely used models available today perform well in Basque, although they are not perfect. In the data sets used to train AI models, the number of texts in Basque is much lower than in other languages, with English being the most prevalent by far. This affects the following aspects:

- **The quality of the answers:** Answers may not be as precise or appropriate as in other languages.
- **Linguistic accuracy:** Although tools are improving all the time, grammatical errors or odd phrasing may sometimes still occur.
- **Cultural knowledge:** If we ask AI tools about Basque culture or our immediate reality, the answers they give may be erroneous or incomplete.

Teachers have a role to play here. By using these tools ourselves in Basque, we can help foster the survival and everyday use of our language. In addition to setting an example for students, by using Basque-language tools in our professional activities and critically exposing their limitations, we are actively working towards protecting the future of minority languages and ensuring digital sovereignty.

Fortunately, there are several initiatives and organisations that are developing artificial intelligence tools in Basque. These include the Llama-eus-8B model created by Elhuyar's Orai artificial intelligence research group and the Latxa model developed by the HiTZ centre at the University of the Basque Country (UPV/EHU). These models cannot yet be used as chatbots, but they constitute a solid foundation for developing new tools in the future, leveraging scientific and technological advances in AI for the benefit of Basque and taking steps towards ensuring our technological sovereignty.

### **Hallucinations (incorrect answers)**

Sometimes, AI tools can provide inappropriate, incorrect or out-of-context answers. These answers are known as *hallucinations* and can occur for the following reasons:

- Lack of information: if there is little data on a given topic.
- The model has learned a faulty pattern: due to internalising biases or errors.
- Excessive creativity: sometimes, models try to provide creative responses that may not be appropriate.

Let's look at an example using a chatbot. If we look at the example, we see that the AI tool invented the time of the outing ('8:30'); consequently, **unsupervised and uncorrected use can cause problems:**



I'm a teacher. Write a message to remind my students' parents that tomorrow they need to arrive half an hour earlier, because we're going on a school trip. In Basque, Spanish, English, and Arabic.

Good morning, parents,

We remind you that tomorrow, due to the excursion, it is necessary to bring your children half an hour earlier, that is, at 8:30 in the morning. We hope everyone prepares what is needed and that we have a good outing. Thank you.

(ChatGPT 4o, 27/10/2024)

## Creativity control

Most of the AI tools we use offer creativity and randomness control options. When the creativity setting is low, responses are more precise and deterministic (the models choose the most likely answers). However, when the creativity setting is high, responses are more creative and random (and may also be less likely).

In the most widely used chatbots, this parameter is controlled through text. For example, if we want creativity to be lower, we can attach a document for the model to base its response on or provide the broadest and most specific context possible. However, if we want a highly creative response, we can ask the model to think outside the box or to give 30 different answers.

## Things they do well (and things they don't)

Given current advances in artificial intelligence, the following are the types of task models do best:

- Coming up with many ideas. For example, we can ask the model for 20 different ideas and then choose the best one. Depending on the result, we can also ask it for more ideas, as many times as we want.
- Areas in which we are experts. We can ask for data that we ourselves can validate.
- Writing summaries. AI models are very good at summarising large volumes of information, although there is always a risk of errors.
- Modifying format. AI models are good at increasing or reducing complexity,

which is why they are able to adapt the text of a report to a presentation, say, or adapt the content of a document to suit a different audience.

- Helping us when we do not know how to proceed. If you are stuck on something, you can ask the model for 20 possible solutions, for example.
- Increasing our knowledge through discussions with the chatbot.
- AI is useful for challenging our knowledge. For example, by simulating a fictional character, or by putting themselves in the role of an expert, models can help us challenge our knowledge and beliefs.

In sum, AI is useful for tasks that require many ideas and demand speed and diversity; they are also useful when we need expert help or a new approach.

However, in other situations, the use of AI is not recommended:

- In situations involving sensitive data. For example, in issues that affect student health, well-being or assessments.
- In some learning processes. It is often advisable for each individual to write their own summary, reflect on the topic at hand or solve the problem themselves.
- When very high precision is required. AI makes mistakes that can be very believable. *Hallucinations* are difficult to detect and often go unnoticed by users. While it is possible to reduce errors, it is impossible to eliminate them altogether.

## For further research... (in Basque)

If you want to find out more about how AI works, watch these three Topagune Birtual sessions on AI:

- Topagune Birtual. Artificial Intelligence (I): 'What is artificial intelligence?'  
<https://vimeo.com/904731779>
- Topagune Birtual. Artificial Intelligence (II): 'The technology underlying AI'  
<https://vimeo.com/916496237>
- Topagune Birtual. Artificial Intelligence (III): 'Artificial intelligence in education: opportunities and challenges'  
<https://vimeo.com/925862981>
- All Digigune videos:  
<https://digigunea.euskadi.eus/eu/topagune-birtualak>



# 4

## THE RISKS AND LIMITS OF ARTIFICIAL INTELLIGENCE

### 4.1. THE ILLUSION OF LEARNING

It has long been known that to truly assimilate content, is not enough to simply read it. For the learning process to be meaningful, it is essential for the learner to be able to explain and remember what has been learned, as well as to be able to draw inferences based on it in other fields. This problem is common among children and adolescents, whose metacognitive skills are not yet fully developed, making it hard for them to properly assess their learning process. Furthermore, the phenomenon known as the *illusion of familiarity* often occurs: certain content is familiar to us, but we are unable to explain it in depth. This in turn can lead to poor cognitive transfer, or in other words, the inability to apply what has been learned to new situations, which instead of deep learning, may stimulate superficial learning. Consequently, if we decide to use chatbots with adolescents, it is vital to monitor how students use them and to work on the metacognitive dimension of learning beforehand.

## 4.2. REDUCING COGNITIVE SEDENTARISM AND DEVELOPING CRITICAL THINKING SKILLS

The intensive use of artificial intelligence increases the risk of *cognitive sedentarism*. In other words, it diminishes the cognitive abilities that foster deep thinking and critical reflection by enabling individuals to receive quick and simple solutions using AI tools. In the long term, the principle of 'use it or lose it' prevails, and improper use of AI can significantly reduce students' intellectual autonomy, memory strategies and flexible capacity to solve complex problems.

For example, the systematic summarising of texts using AI may result in students never critically examining the content they are presented with, even though the final result of the assignment is a formally adequate text. This reduces their ability to make critical decisions and generates dependence on quick answers. Furthermore, in terms of memory, a parallel can be drawn with the phenomenon known as the *Google effect*, which reduces the need to assimilate information in a sustained manner, since knowing that the information they need can be accessed at any time may deactivate students' memory strategies.

Therefore, for the pedagogical contribution made by AI to be positive, the following conditions must be met: students must play an active and critical role throughout the process; results must be adapted to specific contexts; each individual must find their own voice, style and authenticity; and the final result must be combined with each individual's own personal thoughts and opinions. Furthermore, students should be able to explain everything they have done using artificial intelligence in their own words, apply it and relate it to other ideas.

## 4.3. ACCELERATION OF THE PACE OF LIFE

Artificial intelligence tools facilitate and streamline everyday tasks, but this can have a paradoxical consequence: instead of lightening our workload, they can generate a tendency to take on more work and accelerate the daily pace of living. Although technology offers us the opportunity to have more free time, following the logic of productivity and performance, people in our society tend to fill that free time with other tasks. Hartmut Rosa has developed several theories on the acceleration of society and has warned that these types of tool can lead to the loss of meaningful life experiences. To prevent this from happening in both education and society, we must use artificial intelligence consciously and leverage it to lighten our workloads and encourage a more moderate pace of life. We should use AI tools to free up more time for leisure, creativity or relaxation, rather than fall into the trap set us by the logic of productivity.

#### 4.4. EDUCATION IN THE HANDS OF LARGE CORPORATIONS

The development and use of artificial intelligence is in the hands of a small number of large technology corporations such as OpenAI, Meta, Google, Microsoft, Amazon and Apple. This situation entails a series of risks in terms of educational autonomy and transparency:

- The centralisation of technological and pedagogical decisions: These corporations may be out of touch with or unaware of the needs of education and often prioritise economic profit over real value in this field. This can force education systems to adapt to market logic.
- Loss of technological autonomy: Schools and educational institutions may become dependent on corporations by letting the tools they provide become indispensable. This can lead to a reduced range of options for users and increased costs or the risk of imposed changes to the terms of use.
- Globalised, standardised approach: These corporations often offer models developed from an English-speaking or Western-centric perspective, which can undermine the ability of education systems to preserve linguistic and cultural diversity.
- Lack of transparency regarding the origin of the data: Large corporations do not disclose the origin and quality of the data used to train their models.

To compensate for this situation, educational institutions and stakeholders must take steps to prioritise tools that are appropriate to local and regional needs. Furthermore, it is essential to establish mechanisms to monitor the impact of large corporations on educational policies.

#### 4.5. NOT PRESENTLY SUSTAINABLE

At present, artificial intelligence systems are not sustainable, since they consume large quantities of energy, water and minerals.

This seriously harms the environment and calls into question the long-term sustainability of these technologies. We therefore recommend that teachers use these technologies sparingly in education and prioritise more sustainable alternatives that avoid the need to constantly rely on technology.

## 4.6. BIASES

Artificial intelligence models generally reflect English-speaking perspectives (predominantly from the United Kingdom and the United States), the values of Western societies and Anglocentric (priority given to the English language) and androcentric (priority given to the male perspective) conceptions, which limits the representation of cultural diversity and enhances bias. The following problems should be highlighted:

- **Discrimination against minority languages and non-hegemonic cultures:** Because AI models are based on large amounts of data, they offer a lower quality of results in minority languages and non-hegemonic cultures.
- **Unequal ease of use:** The customs and habits of different cultures are not reflected in the models, which can lead to students developing a limited worldview. Socioeconomic biases may also arise if not all students have the same opportunity to use these tools.
- **Gender and racial biases:** AI models assimilate the biases present in data, which carries the risk of generating sexist or racist responses. For example, an AI working with images may be better at identifying people with light skin than people with dark skin.
- **The digital divide:** Artificial intelligence tools can widen the digital divide between those who have the resources to use these technologies and those who do not (for example, by offering limited free versions and enhanced paid versions). In education, this gap carries the risk of undermining the principle of equal opportunities for all students.

## 4.7. DATA PRIVACY AND SECURITY

AI tools seek to collect user data in order to improve their models. Consequently, before using a tool of this kind, it is important to carefully read the privacy policies, check the tool's settings to see if it is possible to avoid training it with your data, and clarify how the information provided to the tool is managed. There is concern that the personal information shared with these tools could be used to inform future commercial or strategic decisions.

- Basic measures:
  - Do not input any personal data about students or colleagues (names, addresses, marks or any other information that could identify someone).
  - Use made-up or anonymous examples.
  - If in doubt, see what the law says.
- Use secure settings: some tools offer you the option to not externalise data in their settings; for example, ChatGPT offers this option. However, caution is always the best option, and it is therefore better to avoid inputting sensitive data.



# 5

## ARTIFICIAL INTELLIGENCE LEGISLATION

### 5.1. THE EUROPEAN LEGAL FRAMEWORK

On 21 April 2021, the European Commission presented the EU Artificial Intelligence Act, commonly known as the AI Act. It came into force in 2024, although some measures will be implemented later. The act has quite a lot of influence on the way AI can be used in the school environment. Its aim is to regulate AI systems, classifying them according to the level of risk they pose: unacceptable risk, high risk, limited risk and minimal risk.

#### 1. Unacceptable Risk AI

Applications that pose serious risks because they violate human rights.  
Example: systems that read students' facial expressions in order to interpret their emotions and send notifications accordingly.



## 2. High Risk AI

Systems used for making important decisions in the field of education or employment.

Examples: tools for automating exam marking (exams are not marked by teachers); or algorithms that determine which knowledge area a student should be directed towards.

## 3. Limited Risk AI

Tools that guarantee transparency and control in terms of use.

Example: systems that help teachers create educational content or answer questions.

## 4. Minimal Risk AI

Systems that do not require any additional control.

Example: machine translation tools.

As we can see, **some high-risk actions may exist** in the educational field, especially in relation to issues that affect the assessment and classification of students or the making of important decisions about them. This means that schools and tool providers must meet strict requirements, including:

- **Transparency:** AI systems must provide information about how they work and offer clear explanations to users.
- **Data management:** reliable, accurate, and non-discriminatory data must be used.
- **Human supervision:** AI systems must be controlled by humans, ensuring human involvement in automated decision-making.
- **Security:** systems must be secure and reliable and must avoid errors or potential risks.

## 5.2. PRACTICAL EXAMPLES IN SCHOOLS

- **Automatic assessment tools:**
  - These are high-risk tools. For example, a program that automatically marks assignments cannot be used without teacher supervision.
- **Intake processes for student enrolment:**
  - Using AI to accept or reject students is very dangerous and human intervention is required, along with a risk analysis.

Consequently, schools in the Basque Country must review their use of AI tools and adopt the necessary measures to comply with current legislation. This involves:

- Adapting AI tools or implementing new ones to adapt them to current legal requirements.
- Training educators to use AI responsibly and legally.
- Strengthening privacy and data protection protocols to protect student information.

Legislation surrounding AI is constantly changing, and it is likely that more specific regulations will be developed in the coming years at both the national and European levels to address the legal and ethical challenges posed by this technology.

Further details regarding current legislation are provided in Appendix II.

### **5.3. UNETHICAL AND ILLEGAL USES**

Many free artificial intelligence tools are currently available that allow us to do things that were previously unthinkable. This offers enormous potential in the educational field, but also poses significant risks, especially in terms of ethics and legality. Below is a list of some possible harmful actions that can be carried out with these technologies:

1. Making up a song with hurtful or false lyrics about a classmate or teacher.
2. Creating a deepfake video from a photo of a classmate, manipulating the image to make it compromising or humiliating, or to make it look like he or she is doing or saying something compromising.
3. Cloning a classmate's voice to put words into their mouths that they did not actually say. For example, using a WhatsApp audio to create fake messages that could damage their reputation or generate conflict.
4. Creating a photo montage using AI editing tools, placing images of classmates in compromising or out-of-place contexts.
5. Creating fake text messages and modifying real content to simulate conversations between classmates.
6. Altering the physical appearance of classmates' photographs to create images that could give rise to teasing or intimidation.
7. Generating fake emails supposedly written by teachers or classmates.
8. Creating fake profiles on social media or educational platforms with the image and name of a classmate and then using them to spread misleading or humiliating information, or to access other people's accounts.

9. Generating AI content to falsify academic documents (e.g., marks, certificates or results).

Students must be made aware of the fact that when they use AI tools, or any other tools for that matter, they must always respect other people's privacy, integrity and dignity.

## 5.4. HOW TO PREVENT PROBLEMS

It is essential for teachers to anticipate the possibility of students accessing these types of tools and content over the Internet. Of course, it is not always possible to anticipate problems, but letting students use tools and content with no guidance at all may pose a greater risk. If they encounter them on their own online, there is a risk that the context in which they receive them may be distorted or incomplete. Platforms or peer groups often present this content lightly or as if it were just silly behaviour, without pointing out the harm it can cause and the ethical and legal implications entailed. It is therefore essential to stay one step ahead of possible problems and provide students with a clear ethical framework to ensure that they use these technologies safely and respectfully.

If a text, image or video was created with the intention of offending someone and is disseminated, the pain caused lasts for a long time and reaches more people. Given that these two characteristics are usually indicative of bullying, it is necessary to act carefully, since the Education Department has a procedure for dealing with these alleged situations: 'Resolution of the Deputy Regional Minister for Education regulating the protocol for action in situations of bullying in non-university education institutions of the Autonomous Community of the Basque Country and the protocol for intervention and postvention in the event of suicidal behaviour in the educational field' (2024)<sup>5</sup>.

## 5.5. EXAMPLE OF AN AWARENESS CAMPAIGN AIMED AT SECONDARY SCHOOL STUDENTS

This campaign focuses on promoting respectful and ethical use of AI tools among secondary school students. Posters created by the school or by students themselves can be hung in the hallways with the following content:

*Has artificial intelligence been used to harm someone? Don't ignore it!*

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<sup>5</sup> [https://bizikasi.euskadi.eus/eu/home-froga/-/asset\\_publisher/4TsXOPbVhP2d/content/presentation-copia](https://bizikasi.euskadi.eus/eu/home-froga/-/asset_publisher/4TsXOPbVhP2d/content/presentation-copia)

- Remember, cloning voices, creating deepfake content, falsifying messages or images, and using AI to ridicule someone **is neither ethical nor legal**.
- **Ask for help.** If you or any of your friends have been victims of this type of act, don't ignore it. Contact a trusted teacher or seek help through the following channels:
  - Tell someone in your school's BAT group, either verbally or by email.
  - Send a private message to your tutor or a trusted teacher, or make an appointment.
  - Leave a message in the anonymous reporting mailbox.
  - Tell your parents so they can report it to a teacher.
  - Ask a friend for help; get them to report it to a teacher they trust.
- **Don't confuse humour with harm:**
  - We understand that humour is a part of life, but it is important to learn to distinguish between a healthy joke and an action that may be hurtful or illegal.
  - Not everything is funny. Creating videos, images or audio recordings that humiliate or ridicule someone is disrespectful and can have legal consequences. Think about this before doing anything!
  - What you are planning may have administrative consequences at school. Students may face disciplinary measures such as reprimands, temporary suspension or even expulsion, depending on the severity of their actions.
  - Said actions may also have legal consequences. Depending on the nature of the action, it may also result in fines, criminal sanctions or legal proceedings.
- **Respect is the key:**
  - We want the school environment to be a safe and respectful place for everyone. It is okay to use technology creatively, but you should always keep the well-being of others in mind.

These posters will be placed in strategic locations throughout the school, such as hallways, classroom entrances and common areas, to ensure that the message reaches all students.



## 6

# SELECTING ARTIFICIAL INTELLIGENCE RESOURCES FOR TEACHERS

First of all, we strongly recommend that each school decide what stance it is going to adopt in relation to AI. If the decision is made to use it, then the school needs to decide who will use it and for what purpose, what training will be needed, what tools will be used, how risks will be addressed, etc. We recommend that all of this be included in the school's educational project (Digital School Project or DPI).

When choosing tools, we know that the number of available resources is constantly increasing and that keeping up with them all can be stressful. We have therefore compiled a list of some of the most useful tools for teachers, in accordance with the following criteria:

## Tool selection criteria

- They must be useful for teachers.
- They must be available in Europe.
- They must offer a free version.
- They must be the ones that work best in the user's language (for example, in Basque).
- They must be the most widely used by secondary school students.

## If you have never used artificial intelligence tools before

We recommend working between 20 and 30 hours with a single tool: ChatGPT, Copilot, DeepSeek, Gemini and Claude; all work well in Basque (ChatGPT and Claude perhaps function a little better). If you are planning to use it with students, bear in mind that, although most are for ages 13 and up, Claude, for example, is for users aged 18 and over.

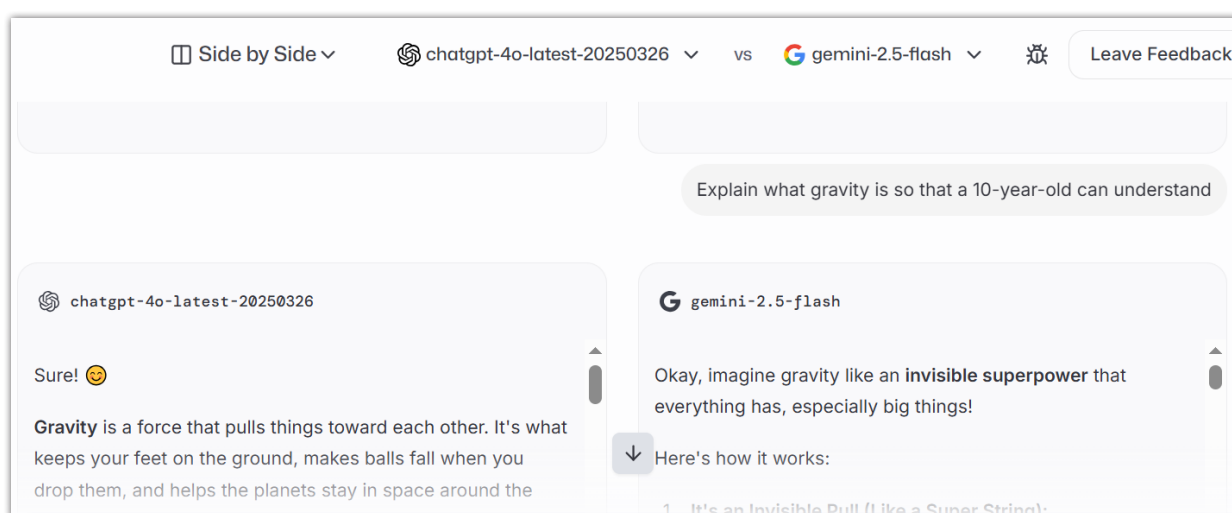
## Which tools to use and for what?

- **To create or adapt content:** There are currently many different chatbots available, each with its advantages and drawbacks. In general, ChatGPT, Claude, DeepSeek and Gemini are the best options because they are the most advanced models and are easy to use. Copilot may be a good option for users of the Microsoft ecosystem. As each chatbot has its own *personality* or style, it is a good idea to try the free versions first to see which one you prefer.
- **To translate texts:** Neural translators (Elia, Traducir, DeepL, Google Translate, etc.). You can also use a chatbot to translate texts. But be careful: if you want to translate a single word, it is better to use a dictionary.
- **Educational tools:** For example, *Digital Reader*<sup>6</sup> (which help students with reading difficulties to improve their reading and writing skills) and AskHezi (dictation system).
- **To search for information:** A chatbot with web access or the intelligent search engine Perplexity. Bear in mind that with some chatbots, you need to activate web access to search for updated information; otherwise, the chatbot relies on the information contained in its training data, which is usually no longer updated after a specific date. Do not automatically rule out other tools though; depending on the nature of the search you want to perform, Wikipedia or a traditional search engine may be more

appropriate. For example, to find the answer to the question 'In what century was the Ilunbe farmhouse in Bidania-Goiatz built?', it is better to look in Wikipedia, since this information is very local and Wikipedia allows you to ensure that it is accurate. And if you want to find the document 'Plan for the Digital Transformation of the Basque Education System 2022-2024.pdf', you would be better off using a traditional search engine.

**Remember: whenever AI tools are used, it is a good idea to check the result to ensure the content is accurate.**

If you want to compare different chatbots, you can use a chatbot arena-type website: <https://lmarena.ai/>:



Note that if you use a registered chatbot, it will learn from your input. The more you use it, the more accurate your results will be. If you do not want the content of your 'conversations' to be saved, you should change the settings accordingly.

When choosing a chatbot, bear in mind that not all offer the same features: creating images, running programs in the tool, sharing conversations with others, interpreting images, making mathematical calculations using programs, Internet access, a reasoning model, a deep research tool, etc. As new versions are released, different models offer many of these tools, or even some others.

If you already have experience with chatbots, we recommend trying these other tools:

Technology	Type	Basque	Institution
<b>Perplexity</b>	Smart search engine	Yes	Perplexity AI
<b>NotebookLM</b>	Virtual research assistant	Yes	Google
<b>Canva</b>	Smart graphic design	Yes	Canva

Each of these tools offers free and paid options. The free versions are usually limited, both in terms of the number of uses permitted and the quality of the results. **Canva** is free for teachers<sup>7</sup> upon request.

For its part, the **NotebookLM** app is useful when **you want answers based solely on sources provided by you** (chatbots like *Chatgpt* tend to add elements from the data with which they have been trained). The app allows you to attach up to 50 documents to each notebook (PDFs, links to YouTube videos, etc.).

## What does the future hold?

Improvements and more new tools will be available in the near future, although no one yet knows exactly how they will evolve.

Tools that currently do not work well in the educational field are expected to improve. For example, transcriptions of photographed handwritten texts are still not optimal; these types of tool have improved greatly in recent years, and more and better options are expected to emerge in the future.

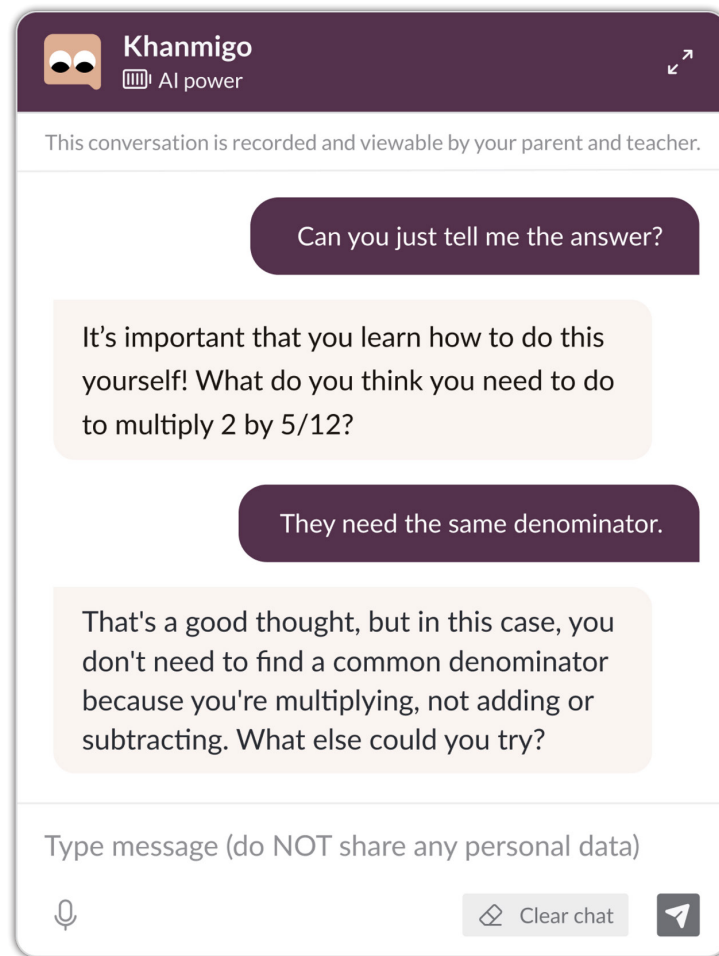
Another example is the student chat being developed by the Khan Academy, which, instead of giving the correct answer right away, helps students get there on their own.

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<https://www.canva.com/es-es/educacion/requisitos-elegibilidad/>





Currently, this tool is only available in the United States. However, in the medium term, this type of chatbot is expected to be available here as well, including some that work well in Basque.

Finally, it seems that systems known as agents will soon be available. These are not simple chatbots and will be able to perform various actions autonomously, following work instructions on our behalf. For example:

- Automatic information gathering: you can ask an AI agent to summarise documents, find information online, organise the data and present a decent result.
- Calendar and diary management: you can ask it to propose work sessions, meetings or work distribution at school, organise your free time, etc.
- Automatic report generation: AI agents can integrate all types of data and easily interpret key indicators to ease teachers' daily workload.

These tools (*AI agents*) are already being used. For example:

- OpenAI's Deep Research: consults around 20 different sources and produces a 10-20-page report. Paid versions are better than free ones.
- Claude Code: for programming.
- Etc.

Functional commercial versions of these agents are not yet widely available. However, given the fast-paced evolution of artificial intelligence, in the near future we expect to be able to use these tools to streamline work, automate processes and reduce administrative burdens. Needless to say, it is important to monitor how they operate to ensure they make the right decisions and manage information correctly.





# 7

## TIPS FOR USING CHATBOTS

People are often surprised by how chatbots behave because they fail at seemingly simple tasks yet do things we think are very difficult quickly and well. Since *they're black boxes*, real-life experience will be the key to understanding them: the more you use them, the more you will get out of them. Below are some tips for getting started with chatbots.

**Take time to familiarise yourself with AI.** It is important to train yourself with AI tools. To become familiar with a chatbot's capabilities and limitations, you should spend at least ten hours using it. Initially, the chatbot may give generic or incorrect answers. However, if its memory has been activated, the more you correct it, the better the results it will give you.

**Make up a couple of prompts and use them with different tools to compare them.** The question could be about a skill or hobby of yours, or something very close to home, like your town or neighbourhood: 'What do you know about Munitibar?'. Feeding the same prompt to different tools will help you see which one gives the best answer and which one's style you like best. If you want to ask a question about a specific field of knowledge, it is best to start with a topic you are familiar with. For example, if you are a keen mycologist, you could ask: 'What are the characteristics of the green-cracking russula?'.

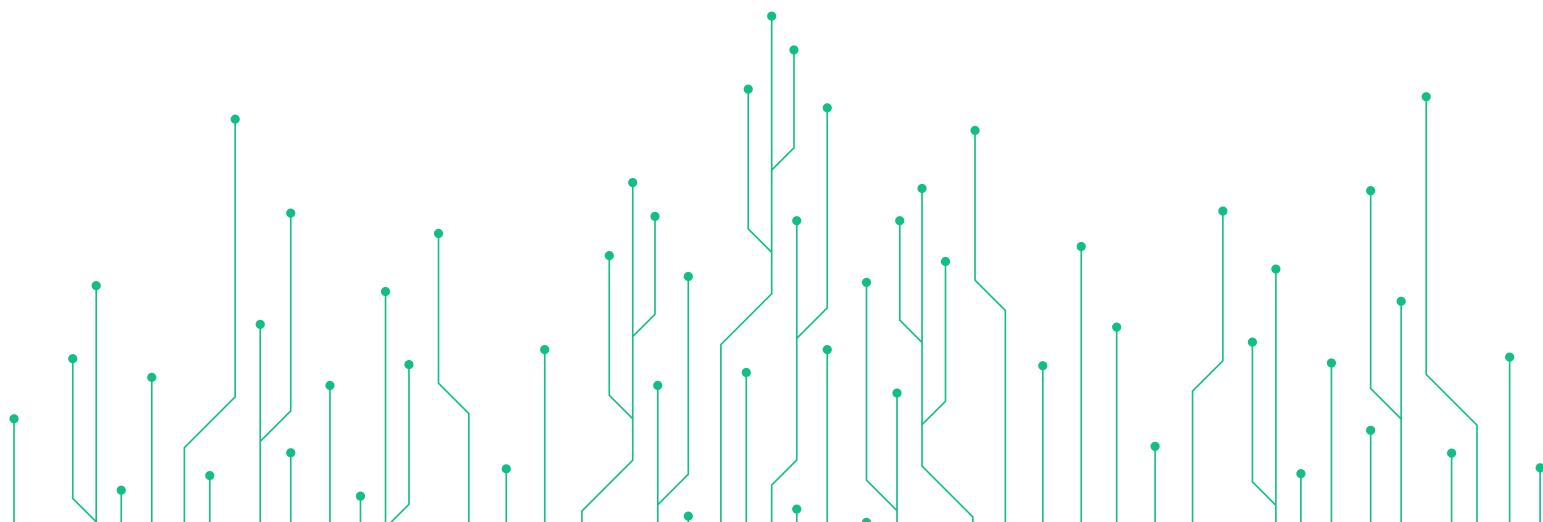
**Include elements that describe the context of the communicative actions in your prompts.**

- About the prompter: 'I am a primary school music teacher...'
- About the prompt: 'For my 9-year-old students...'
- Genre of the text you want: 'Give me some examples of three different prototypes for making a musical instrument.'
- Field of use: 'Something that can be made by students with recycled materials in one hour.'
- Objective: 'To develop creativity, manual dexterity and teamwork.'
- Language: 'Answer in Basque.'

**Start with simple requests and gradually refine them.** Rather than starting with very long and complex prompts, it is better to begin with a simple request and start chatting with the chatbot. That way, it is easier to correct its responses and adapt the result to what you need.

For example:

1. Prompt: 'Answer in Basque. Write a paragraph to prompt a discussion on climate change for 12-year-old students.'
2. Next: 'Add more scientific data.'
3. Next: 'Add specific examples from Gipuzkoa to trigger a debate.'
4. Next: 'Now outline the dynamics for a 45-minute debate, based on the paragraph you provided.'
5. Next: 'Provide a supplementary list of questions to redirect the debate if students go off topic.'
6. Next: 'Provide an assessment rubric taking into account the attached criteria [irizpideen dokumentua.pdf].'
7. Continue like this until you get a result you are happy with.



**Take advantage of the conversation to provide as much context as possible.** For example, as of December 2024, ChatGPT has the following limits:

Limit	Free version	Plus version (paid)
Num. words	~3,000 words	~25,000 words
Num. pages	~ 10 pages	~ 70 pages
Attachable documents	10 maximum	10 maximum
Total size	50 MB	50 MB

At the end of a request, you can say: ‘...and for this, please take into account the attached documents.’ Or simply add a text of up to ten pages.

**Working with a chatbot is an ongoing conversation.** Give feedback, request clarification, ask as many questions as you want. Take advantage of its infinite patience.

## The importance of register and netiquette

Some experts claim that speaking politely to machines may reinforce positive habits in human interactions. This is linked to the idea that language shapes our way of thinking and acting (the Sapir-Whorf hypothesis). Others, however, believe that it is inappropriate to address machines in this way, because treating the machine as if it were a human being may cause confusion in the user.

Researchers are currently exploring the extent to which the way we phrase prompts influences an artificial intelligence tool. A recent study<sup>8</sup> concluded that ‘It is difficult to predict the best way to use a prompt or a request.’ Sometimes speaking politely (saying please and thank you) improves the response; other times, it can lead to errors. Consequently, the conclusion is that there is no single useful style or formula for giving prompts to an AI machine.

As teachers, we must take note of the registers students use when working with AI tools, and this can also be an opportunity to work on the use of appropriate

registers. It may help students internalise the basic principles of netiquette, both in human interactions and in their digital interactions with artificial intelligence.

**Working in Basque.** New technologies, such as chatbots, pose a new challenge for the Basque language. Although these tools have a good level of Basque, a trend is emerging whereby many adult and young users tend to use Spanish in their dealings with them and then translate the result into Basque using chatbots or machine translation tools. To encourage the use of Basque among young people and keep the language alive, it is essential that we raise awareness about working in Basque and that we ourselves set a good example.

**Make specific requests.** Give specific and concrete instructions. For example, do not say 'Prepare a report on the pros and cons of online learning,' but rather 'Generate the initial structure of a report on the pros and cons of online learning for a secondary school in the Lea Artibai region of Bizkaia, to develop a specific syllabus for my students who have to work from home, taking into account the attached objectives, competencies and content, and keeping in mind that the students have the following characteristics: [description of their characteristics].' Next, fine-tune the chatbot's output through conversation.

**Contextualise and give examples.** The chatbot will understand your request better if you provide some context. Include examples, background and information about the format you want.

**Use AI as a thinking tool.** It is not just a tool for completing tasks; it can also be a good tool for fostering thought and creativity. Use it to come up with something new or to help organise your ideas.

**Ask for many options.** Do not ask for just one idea, but for 15 different ones, for example. You can then choose the one you like best or combine several different ones. Or you can continue on by saying: 'Give me 15 more ideas like numbers 4 and 7.'

**A chatbot is not a search engine like Google.** AI tools do not always provide coherent or reliable answers. Therefore, if you are going to use them like a search engine, make sure you ask for sources and then check that they are accurate.

**Be careful with sensitive information.** Do not share private or sensitive data; always err on the side of caution.

**To write reports, use the canvas option.** The canvas option allows you to make changes directly to the document as a text editor.

Create an initial structure for a report using the canvas option, outlining the pros and cons of online learning for a secondary school in the Lea Artibai region of Bizkaia, with the aim of developing a special syllabus for students who need to study from home.

+ ⚙️ | [Canvas](#) x



The screenshot shows the ChatGPT interface with a chat window on the left and a report canvas on the right. The chat window contains the prompt: "Create an initial structure for a report using the canvas option, outlining the pros and cons of online learning for a secondary school in the Lea Artibai region of Bizkaia, with the aim of developing a special syllabus for students who need to study from home." Below the chat window is a text input field with the placeholder "Write or code" and a "Send" button. The report canvas on the right is titled "Canvas-Based Report Structure: Online Learning in Secondary Education (Lea Artibai Region, Bizkaia)" and contains the following structure:

**1. Context and Purpose**

- Brief overview of the Lea Artibai educational context
- Objectives of the report
- Rationale for developing a tailored syllabus for remote learners

**2. Methodology**

- Stakeholders consulted (teachers, students, families, local authorities)
- Tools and data sources (surveys, interviews, academic performance reports)

**3. Advantages of Online Learning**

- Flexibility in schedule and pace
- Personalized learning paths
- Access to diverse digital resources

On the right, the user can edit directly the report



## 8

# WHAT CAN TEACHERS USE ARTIFICIAL INTELLIGENCE FOR?

AI offers many possibilities in the educational field. The main benefit is that it can help teachers in their practice and enrich the learning process, providing the situation remains under the teacher's control and the decision to use AI tools is rooted in solid pedagogical foundations.

Below we suggest some ideas for this, with examples from different stages and areas. Also, bear in mind that outlined in the 'Tips for using chatbots' section: describe the context of previous communicative actions, request multiple versions, request adaptations for people with learning difficulties, etc.



## 1. To create or adapt educational content

Stage	Topic or field	Example prompt
Pre-school	Growing in harmony	Write a short story to work on harmonious coexistence and emotional development. It should help children identify emotions and talk about them. For example, in a story entitled 'On the Magic Mountain', the animals of Busturialdea help each other, and students can draw pictures of their emotions. Avoid using difficult stories or technical terms to ensure that the result is appropriate to the children's level of understanding.
Pre-school	Discovering and exploring the environment:	Design an activity to help children explore the natural environmental and learn about natural diversity in Alava. For example, collecting leaves and classifying them by shape and size. Do not choose environments that may be dangerous or too difficult for this age group.
Pre-school	Communicating and representing reality	Create a game that helps children learn how to represent reality. Use geometric shapes and bright colours, for example, to build a house with building blocks. Do not add complex rules or time constraints.
Primary school	Knowledge of the natural, social and cultural environment	Explain the cycles of nature (e.g., the water cycle) using everyday examples. For example, the heat of the sun evaporates water, causing it to rain. Add examples that children can identify in their environment, such as rain or tap water. Do not use overly technical words or complex processes.
Primary school	Language and literature (Basque and Spanish)	Design an exercise for developing language skills, in which children must write a story in Basque or Spanish. For example, give them the start of a story: 'Once upon a time, in a forest...' and ask them to finish it. Do not use a topic that requires the use of difficult words or many different sources.
Primary school	Mathematics	Create a maths-related game to help students learn how to add up large numbers. Use colourful counters or card-type materials. Do not use complex algorithms or digital resources only.

Primary school / Secondary school	EUSLE (language immersion for newly arrived non-Basque-speaking students)	Design an activity in which students compare Basque with their native language (for example, Arabic or Romanian). Include grammatical comparisons between the languages, such as word order or the study of verb forms. Do not ask students to work solely on the theoretical part of a language with no practical context.
Primary school / Secondary school	EUSLE (language immersion for newly-arrived non-Basque-speaking students)	Design an activity in which students compare expressions in Basque with those in their native language (for example, Chinese or French). For instance, ask students to explain this phrase in Basque and in their original language: 'Good morning! How are you?' The idea is for students to identify the structures, greetings and word classes used in both languages.
Secondary school	Mathematics	Explain linear equations using practical examples such as: 'How much money will you need to cover 5 days if you spend €10 a day?' Propose activities based on real-life situations. Do not present a merely formal definition or an abstract theory.
Secondary school	Natural sciences (biology, geology, physics, chemistry)	Design a simple scientific experiment to study matter and its changes, such as the freezing and melting of water. Add an observation table and questions to encourage a discussion of the results. Do not propose hazardous materials or complex experiments.
Secondary school	Social sciences (history, geography)	Explore an important event in contemporary history (for example, the Industrial Revolution) from the perspective of its consequences on everyday life, such as the development of railways and work in industry. Do not include only lists of dates or years; focus more on students' understanding.
Secondary school	Basque language and literature	Design an activity to encourage oral expression and creativity. For example, ask students to write a short story designed to be read out loud and add a rubric to assess narrative coherence, linguistic correctness and level of creativity. Do not propose a mere written activity or one lacking the tools required to develop oral skills.

Secondary school	Spanish language and literature	explain how you can learn to interpret a literary text, for example, through an in-depth reading of a poem. Add questions to help students understand the text's linguistic resources and poetic imagery. Do not use texts that are overly complex or age inappropriate.
All stages	Creating and adapting content	Design an activity to address the main concepts related to an area or topic. Add guided questions to help students understand and impose a time limit.
All stages	Creating and adapting content	Adapt complex materials to students' age and level, adapting the language and adding images or diagrams. For example, use everyday situations to explain Newton's second law. Do not use very technical definitions or abstract examples.
All stages	Creating and adapting content	Design an activity to promote cooperative learning that includes a group project. Add a rubric for students to assess their participation and contribution. Do not design an individualistic activity, but rather focus on monitoring teamwork.
All stages	Creating and adapting content	Suggest the use of digital content such as infographics and educational videos to increase students' interest. Add a guide on how to understand and discuss the content. Avoid basing the entire activity solely on digital materials and bear in mind that not all students have access to technological resources.
All stages	Self-assessment	Create a self-assessment activity based on the attached documents [documents].

## 2. To help speed up administrative tasks

AI can speed up teachers' routine daily tasks, leaving teachers more time for direct contact with students.

Some examples of initial prompts are:

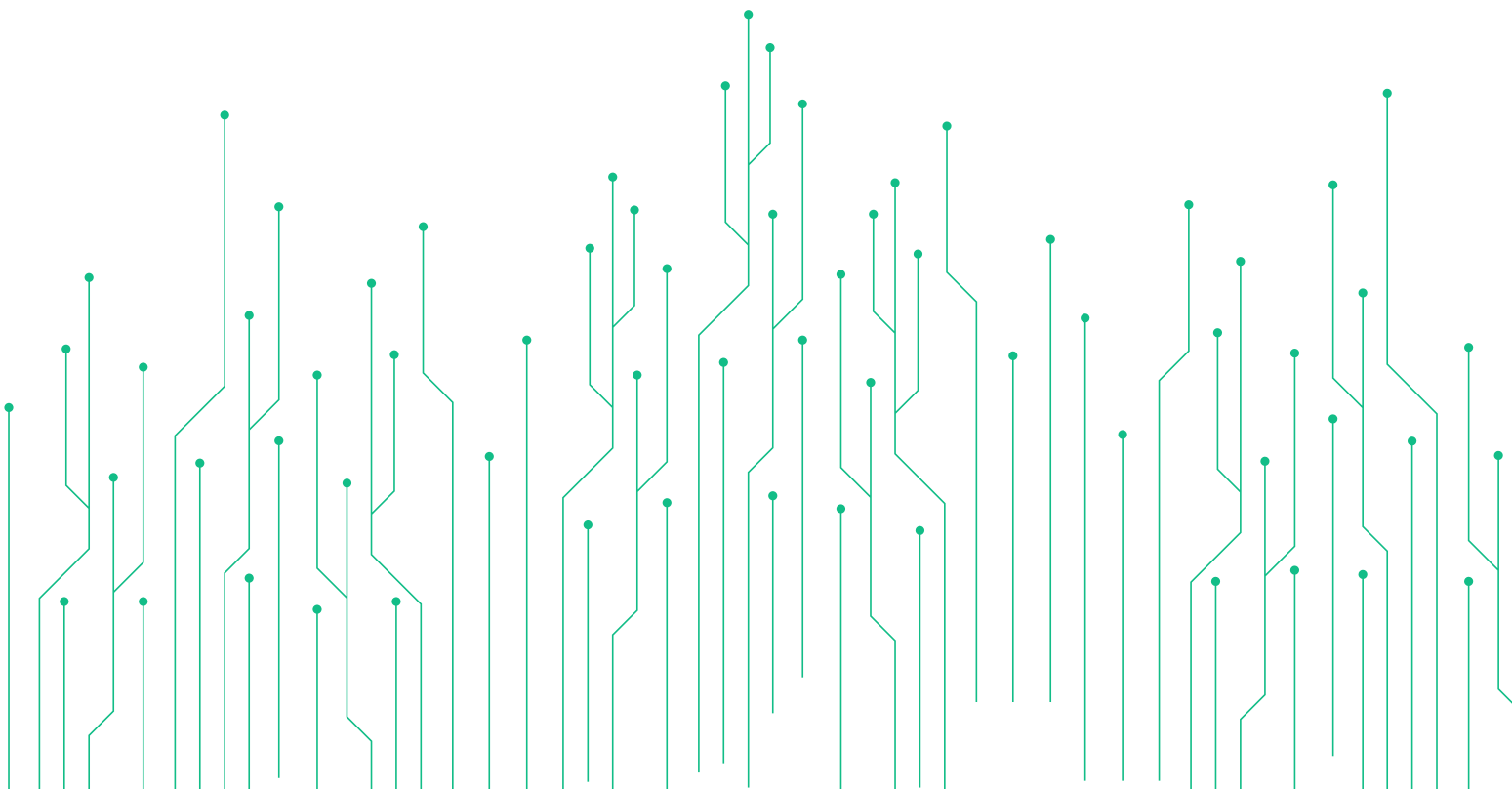
Aim	Task	Example of an initial prompt
To prepare an inventory of teaching resources	Resources	'Prepare an inventory of teaching resources organised into categories: toys, books and technological materials.'
To prepare assessment meetings	Assessment	'Draw up an agenda for a teachers' meeting on assessment, specifying the topics to be covered, point by point.'
To organise seminars for teachers	Training	'Prepare a programme for a teacher training session, outlining the topics and speakers, as well as the main objectives and expected duration.'
To facilitate communication with families	Communication	'Write a brief message addressed to all families, summarising the main activities of the school's 2030 Agenda project and the guidelines for participation.'
To start preparing school documents	Management	'Write a draft of the school's annual communication plan for improving the relationship between teachers, students and families.'
Long-term planning	Management	'Generate a long-term plan for the 2030 Agenda project, outlining monthly objectives, activities and assessment methods.'
To prepare protocol documents	Legislation and protocols	'Draft a protocol for identifying and managing cases of bullying at school, explaining in detail the different intervention processes.'
To prepare presentation reports for new projects	Projects	'Draft a report for the launch of a new co-educational project, outlining its aims, stages and the resources required.'

### 3. The challenge of correcting students' work and exams with the support of artificial intelligence

Artificial intelligence tools cannot be used automatically to mark students' work or exams. However, in some cases, they can assist in the assessment process, but only as an aid, and it should be noted that the corrections made by these tools must be carefully checked for possible errors. This is also a requirement established by the European Artificial Intelligence Act (AI Act<sup>9</sup>).

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<sup>9</sup> <https://www.europarl.europa.eu/topics/en/article/20230601STO93804/eu-ai-act-first-regulation-on-artificial-intelligence>





# 9

## WHAT CAN STUDENTS USE ARTIFICIAL INTELLIGENCE FOR?

### 9.1. IN PRIMARY SCHOOL

As indicated in the introduction to this guide, **chatbots such as ChatGPT cannot be used by those aged under 13.**

Furthermore, most teachers do not believe that tools for automatically completing creative tasks using artificial intelligence are suitable for use with primary school students, and consider other methods that actively develop children's creativity in a more participatory fashion to be more effective. For example, students' expressive capabilities and creative autonomy are more comprehensively and sustainably fostered by drawing by hand, creating songs with musical instruments or using arts and crafts that stimulate the imagination (rather than, for example, using an artificial intelligence tool that automatically generates songs).

However, it is possible to work on the topic of AI in primary school, within the framework of computational thinking. To this end, we suggest the three following resources:

- **Moral Machine:** <https://www.moralmachine.net/hl/es>  
Developed by MIT Media Lab, this platform presents the ethical dilemmas faced by autonomous vehicles. It may encourage students to think about and discuss technology use.
- **Code.org:** <https://code.org/>  
This is a well-known platform for teaching students of all ages the fundamentals of programming and computer science. It offers free courses and activities designed to encourage computational thinking and problem-solving.
- **LearningML:** <https://web.learningml.org/>  
This is a tool designed to teach the basic concepts of AI and machine learning. Students can create models, collect data and develop applications in programming environments such as Scratch, using AI.

## 9.2. SECONDARY SCHOOL

Research in the fields of neuroscience and developmental psychology<sup>10</sup> has found that the development of critical thinking, inhibitory control and decision-making skills in adolescents continues into early adulthood, suggesting that adolescents are not mature enough to autonomously and critically manage the abundant information provided by artificial intelligence tools.

This means that without adequate pedagogical guidance<sup>11</sup>, these tools could result in students using superficial learning strategies that enable them to avoid making an intellectual effort, rather than fostering deeper understanding. This poses a risk of what is sometimes referred to as 'cognitive sedentarism' (outlined in section 9.2).

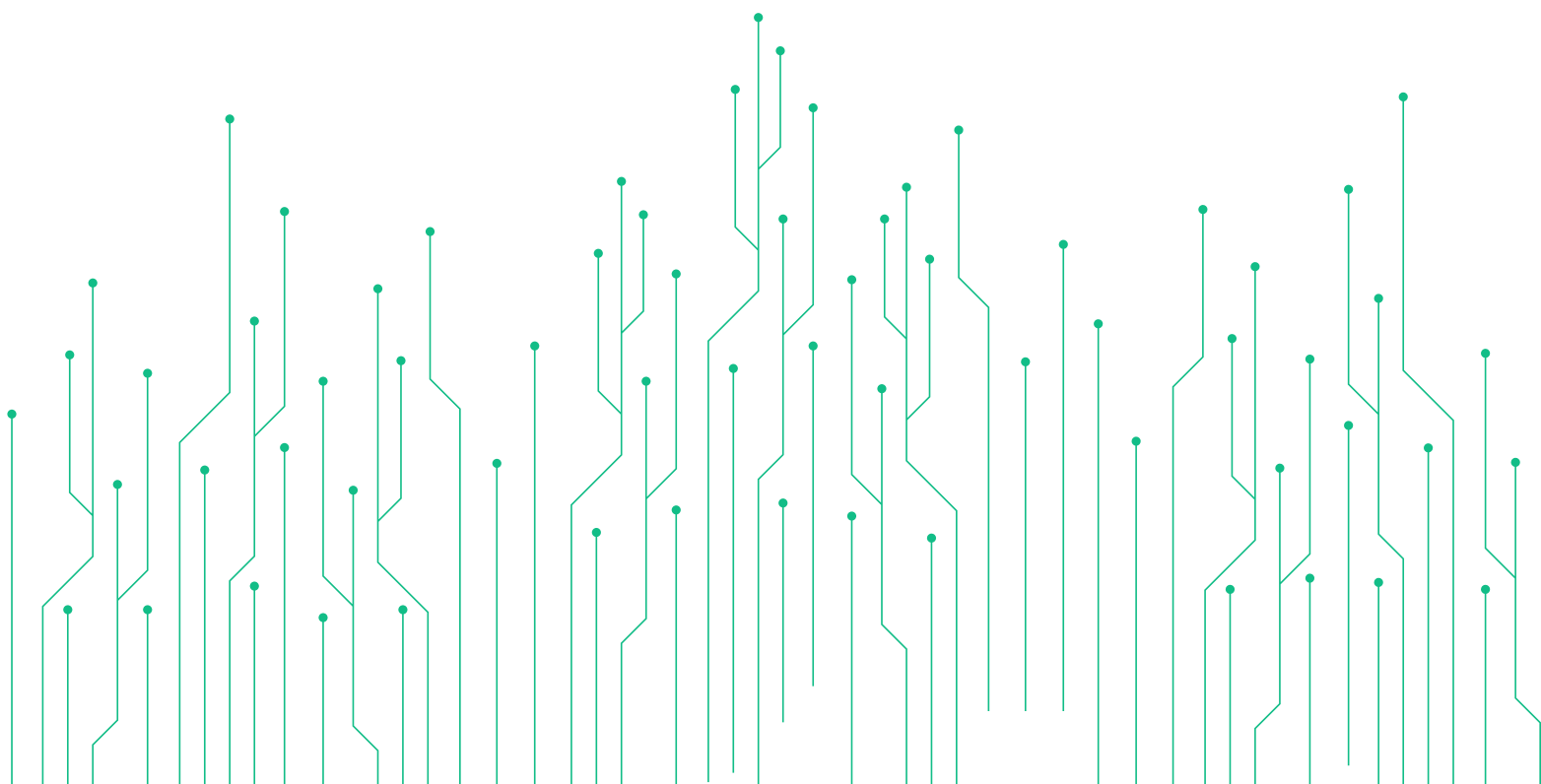
In secondary school, the difference between compulsory secondary education and six-form college is significant, both in terms of psychological maturity and in students' capacity for attention and self-regulation. Since chatbots are prohibited by law for children under 13, and these capacities are still being developed at that age, chatbots should not be used during the first two years of compulsory secondary education. In relation to later years, if the decision is made to use chatbots, said use must be planned and measured. To ensure this, it is important to clearly define when, where, how and for what purpose the

<sup>10</sup> Steinberg, L. (2005). Cognitive and affective development in adolescence. *Trends in Cognitive Sciences*, 9(2), 69–74. DOI: [10.1016/j.tics.2004.12.005](https://doi.org/10.1016/j.tics.2004.12.005)

<sup>11</sup> Zimmerman, B. J. (2000). Attaining Self-Regulation: A Social Cognitive Perspective. In M. Boekaerts, P. R. Pintrich and M. Zeidner (Eds.), *Handbook of Self-Regulation* (pp. 13–39).

tools will be used, and the selected tools must be systematic monitored, with teachers coordinating their efforts and reaching consensus-based agreements.

Furthermore, it is important to emphasise that the decision to use or not use these tools must be based on adolescents' psychological development and maturity, as many adolescent students are still developing skills in time management, sustained attention span and deep thinking. We therefore recommend doing some test runs before deciding to use these tools; it is also a good idea to demonstrate to students how they should be used (you can use the recommendations provided in this guide regarding the use of chatbots).





## What should students use artificial intelligence for (if the decision is made to use it)

Aim	Example	Example prompt
<b>To create and develop ideas</b>	Coming up with new ideas for a project or essay.	Give me ten ideas for a project on renewable energy, bearing in mind that we are a group of four 16-year-olds with two weeks to complete the project; we study in Bermeo and want the project to be about marine microplastics.
<b>To summarise and adapt your own or someone else's texts</b>	Summarising long or technical documents.	Summarise the attached scientific paper in three paragraphs and in Basque, so that it can be understood by a 17-year-old student.
<b>To help structure texts</b>	Helping to organise the introduction, development and conclusions of an essay.	Improve the structure of this essay. Here is my text: [student's text]. Tell me how I can improve the structure of the text and identify any mistakes.
<b>To build arguments</b>	Preparing arguments for and against a specific topic.	I'm going to give you a topic about which I want you to come up with five arguments for and against. Topic: the influence of social media on adolescents' cognitive development.
<b>To facilitate students' understanding of complex concepts</b>	Coming up with other examples or complementary explanations after the teacher's main presentation.	Explain severity in three different levels of detail and depth.
<b>To create mock tests</b>	Creating sample questions to prepare for a classroom test, and then correcting the answers with the help of the chatbot (orally or in writing).	I want you to generate a mock test. Create a test in Basque comprising five questions based on the content of the attached document. Ask me questions, one by one, and I'll enter the answer for you to correct; then tell me how I can improve my answer when I take the test.
<b>To help improve learning and understanding</b>	Taking on the role of a virtual expert: in nutrition, history, maths...	Pretend to be a nutrition expert and answer questions asked by 15-year-old students about healthy breakfasts. Do not start talking about the topic until a question has been asked and cite your sources in your answers.

## General recommendations for using AI (learned from professional chess players)

The relationship between professional chess players and artificial intelligence can also be leveraged in secondary school classrooms. There is one major similarity between chess players and students: both can use AI tools to learn, but then, whether in a match or an exam, in a presentation or a project, they have to be able to work without the help of technology. Chess therefore offers an unbeatable opportunity to see how players leverage AI tools in their learning process, always bearing in mind that there will be differences in maturity level, abilities, attention control, etc.

First, it is important to remember that, despite having highly advanced AI tools at their disposal, professional chess players nevertheless rely on the aid of a mentor. A mentor helps a player plan and monitor their activities; they also select resources and offer emotional support, among other things. The similarities between this figure and the role played by teachers are evident.

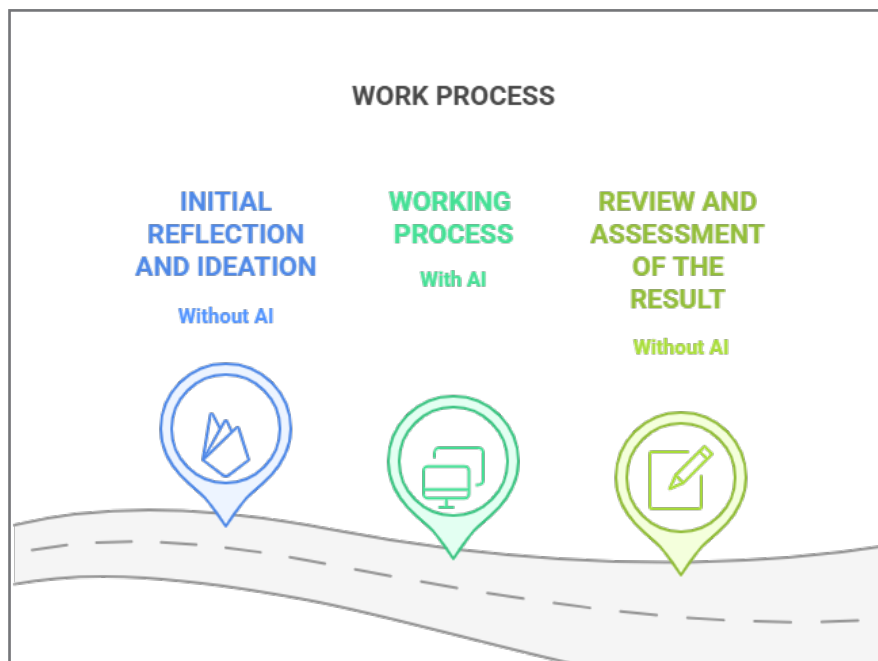
Based on their working method, we can divide the process into three steps:

1. **Initial reflection without technological tools.** In the first step, a player takes a specific amount of time to carry out a personal analysis, without using artificial intelligence. Translated to the educational field, before activating an AI tool, students should work on their own preconceptions, formulate hypotheses, identify doubts, etc. In short, they must engage in a serious process of reflection. This initial work will pave the way for developing creativity, critical thinking and self-regulation.
2. **Controlled use of AI tools.** In the second step, players use AI tools to analyse the best moves from a mathematical perspective. And here is another interesting idea: the mathematically-optimal move according to the machine will not necessarily be the best for each player. One player may have a more offensive style, meaning that if the first option returned by the machine is a defensive move, it may not correspond to his or her personality or style. In such a situation, it would be more useful for the player to choose the machine's second-best answer, in order to maintain his or her own personality, style and authenticity. This teaches us that artificial intelligence proposals must be analysed critically rather than taken as dogma; personal reflection is the key to making the right final decision. In the classroom too, students must find

their own voice, correct the machine's suggestions, critically analyse them, work on them and make them their own.

3. **Final review without AI.** Finally, we propose reflecting again at the end without the aid of artificial intelligence. As philosopher and educator John Dewey once said, 'We do not learn from experience, we learn from reflecting on experience.' To achieve this, the best thing is to think about the whole issue again at the end, without the aid of screens of any kind.

The recommendations given in this section are summarised in the figure below:



### 9.3. CRITICAL, ETHICAL AND RESPONSIBLE USE OF AI BY STUDENTS

To demonstrate to students the value of academic responsibility, it is necessary to adhere to the principle of mandatory citation. In other words, it is important to always clearly indicate the sources of any information used. Furthermore, students must ensure that the content is accurate, as chatbots can sometimes provide incorrect information.

They should also be encouraged to adapt the responses they receive. In other words, it is not enough to simply copy and paste content; students must rewrite it, using their own voice and style.

Consequently, even more importance should be given to developing students' critical thinking, although this skill does not always have to be addressed through technology and activities that develop in-depth reading and deep thinking can also be very effective. In this regard, the 2018 PISA results concluded that students who read books with more than 100 pages were better able to understand information gleaned from different sources, even when said information was contradictory.<sup>12</sup>

Below is a checklist that may be useful for students:

#### **Checklist for the ethical use of artificial intelligence technology:<sup>13</sup>**

- ☐ **I can talk about the content generated without looking at the text.** I understand the content generated, I can explain it to the person sitting next to me without needing the text in front of me, and I have thought about it on my own.
- ☐ **I have acknowledged my sources.** I have cited the origin of the information included and have used reliable sources.
- ☐ **I have verified the veracity of the content.** I have compared the information generated by the AI tools with other reliable sources.
- ☐ **I have rewritten and adapted the content.** I have not directly copied the content generated by the chatbot; I have rewritten it in my own words and added my voice.
- ☐ **I have carried out my own personal reflection.** I have thought about it on my own; I have not asked the chatbot to do it.
- ☐ **I have used an effective prompt.** I have written a clear question or instruction so that the AI tool can provide more precise answers.
- ☐ **I have not shared private data.** I have not shared personal or private information with the AI tool.
- ☐ **I understand the limits of artificial intelligence.** I know that AI can make mistakes and that I should always use it responsibly.

## **9.4. STRATEGIES AND CRITERIA FOR LEARNING TO USE ARTIFICIAL INTELLIGENCE**

Secondary school students are increasingly using chatbots as a source of help or to directly complete their assignments (mainly homework but classwork too), using devices with Internet access (computers or mobile phones). In some situations, this requires teachers to rethink their approach to teaching and assessment.

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12 [https://www.oecd.org/en/publications/pisa-2018-results-volume-i\\_5f07c754-en.html](https://www.oecd.org/en/publications/pisa-2018-results-volume-i_5f07c754-en.html)

13 If you deem it appropriate for your students, feel free to prepare a template using a design tool.

To this end, it is best to use strategies specifically tailored to each situation: in some cases, the use of AI should be allowed; in others, it should be prohibited; and the usual homework model should be adapted.

In light of both the above and past experiences in different parts of the world, we propose fostering the following teaching strategies:

1. **More oral presentations and group discussions**

- **Classroom debates:** ask each student to develop and defend their ideas.
- **Oral presentations:** ask students to present their work to the rest of the group in order to demonstrate their understanding of the topic and their ability to communicate effectively.
- **Group projects:** encourage coordination and collaboration in tasks that require the active participation of all members of the group in order to foster teamwork skills.

2. **Assessment tools**

- **Study with AI, but do exams without it:** if you consider it appropriate, allow students to use AI to complete assignments and prepare for exams, but do not allow them to use in the exam itself. Talk to them about the best learning strategies (doing practice exams; recalling aloud without looking at notes; spreading the learning process out over time, etc.) so that they understand that improper use of chatbots will not help them learn.
- **Clear and detailed rubrics:** establish assessment criteria that value the process, originality and deep understanding, not just the final result.

**Other aspects to consider in relation to assessment**

- **Responsible use of AI:** teach students how to use AI as an aid rather than as a substitute for individual work.
- **Talks on digital ethics:** provide information about the ethical and academic consequences of submitting non-original work and strive to promote honest practices.
- **Clear policies:** agree on and communicate the consequences of inappropriate AI use.

- **Digital divide:** it is essential to ensure that no student is excluded, for example, because they lack the AI tools they need to complete homework assignments.
- **Family involvement:** communicate the objectives of the assignments you set to parents, explaining how they can help their children in the learning process.
- **Student feedback:** listen to students' opinions and suggestions and use them to adapt and improve your teaching methodology and promote a participatory learning environment.

## 9.5. STUDENTS' USE OF ARTIFICIAL INTELLIGENCE FOR HOMEWORK ASSIGNMENTS

Secondary school students' use of AI for homework has raised certain concerns. It is important to provide students with clear guidelines on how to use of AI, both when it is **permitted** and when it is **prohibited**. Below are a series of practical tips and strategies to encourage responsible and effective use of AI.

### When AI use is permitted

#### 1. Encourage transparency and acknowledgement

- **Acknowledge AI use:** ask students to acknowledge when they have used AI tools and specify what exactly they have used them for.
- **Ask students to include their conversation with the chatbot as an appendix or share it with you:** it may be helpful for teachers to see the prompts given by their students and to read the conversations they have with the chatbot. However, conversations can be very long and may involve too many documents, so it is best to determine the appropriateness of requesting them on a case-by-case basis.

#### 2. Ask students to chart their thinking process

- **Drafts and outlines:** ask students to describe the steps they took to complete the assignment through outlines, concept maps or drafts. This helps you understand their thinking process.
- **Reflective and everyday writing tasks:** ask students to explain how they used AI and what they learned during the process.

- **When using online word processors, use the version history option:** if you use tools like Google Docs or Microsoft Word Online, you can use the version history option to see how students have completed the assignment.
  - To view the version history option in Google Docs:  
Click File → *Version History* → *View Version History*.
  - To view the version history option in Microsoft Word:  
If the document has been saved in the cloud (using OneDrive or SharePoint), click *File* → *Info* → *Version History*.
- **Self-assessment and peer assessment:** encourage students to assess their own and others' learning process, identifying strengths and areas for improvement.

## When AI use is prohibited

### 1. Establish Clear Rules

- **Communicate the prohibition:** make sure students understand the assignments in which they are NOT allowed to use AI.
- **Explain the consequences:** indicate the consequences of violating the established rules on AI use.

### 2. Encourage originality and personal creativity

- Set customised assignments: Set students assignments linked to their personal experiences and immediate environment. You can also suggest local topics or topics related to the school community. Chatbots are not very good at these specific tasks.  
For example: 'Write a report about an event that happened in your neighbourhood, told from your perspective.'

### 3. Monitor the process

- **Work in the classroom:** Encourage students to complete assignments in the classroom, under your supervision.
- **Encourage handwriting:** In addition to making AI use more difficult, writing things by hand helps students learn.<sup>14</sup>

14 James, K. H., & Engelhardt, L. (2012). 'The effects of handwriting experience on functional brain development in pre-literate children.' *Trends in Neuroscience and Education*, 1(1), 32-42.

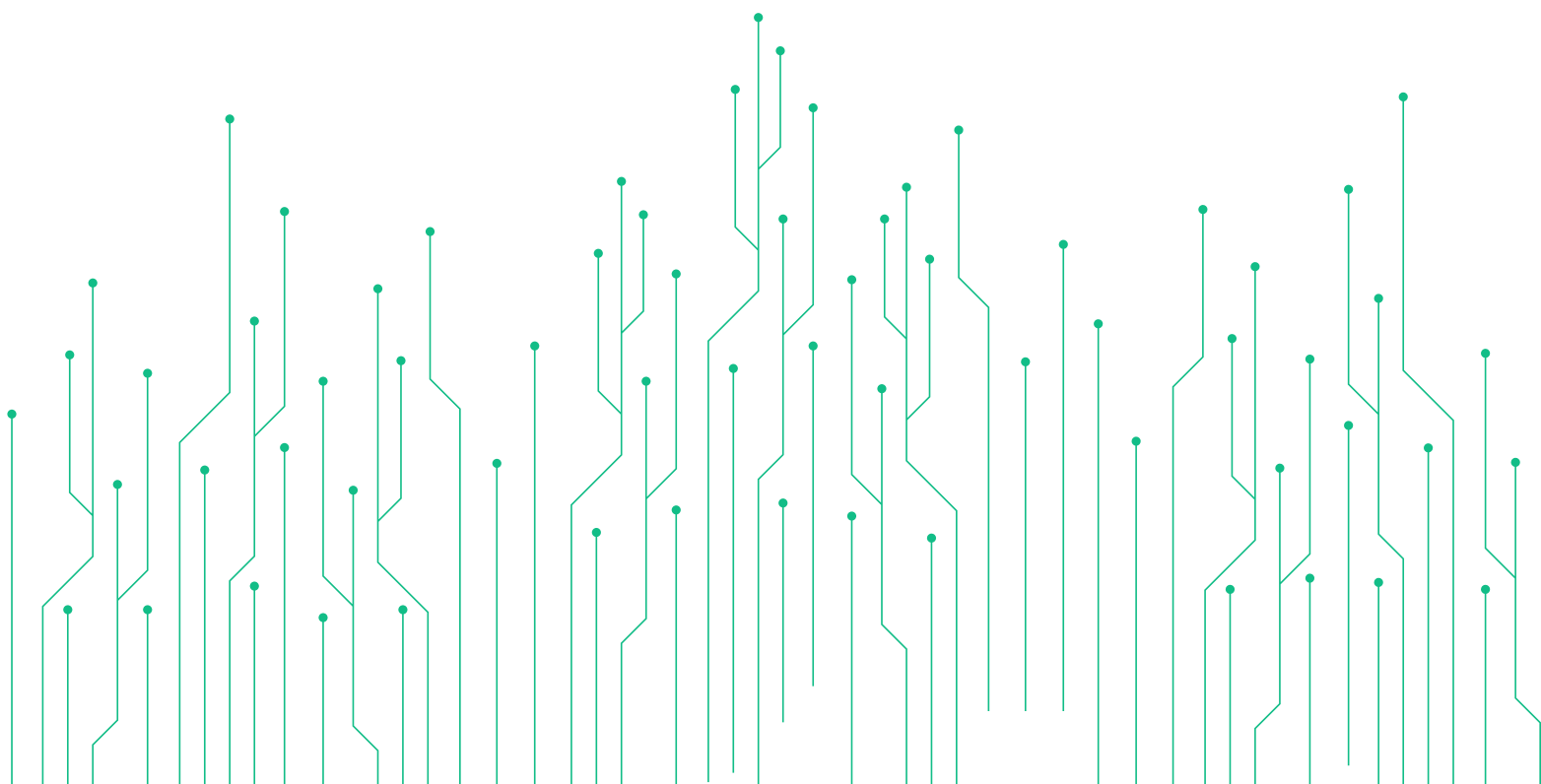
DOI: [10.1016/j.tine.2012.08.001](https://doi.org/10.1016/j.tine.2012.08.001)

Mueller, P. A., & Oppenheimer, D. M. (2014). 'The pen is mightier than the keyboard: Advantages of longhand over laptop note taking.' *Psychological Science*, 25(6), 1159-1168.

DOI: [10.1177/0956797614524581](https://doi.org/10.1177/0956797614524581)

**4. Do not use AI detection tools:** Tools for detecting AI use can give false positives and are therefore unreliable. Consequently, we do not recommend using these tools, since **a student may be accused of using AI when they have not.**

As mentioned above, the same prompt can result in a different answer each time. The more you use a chatbot, the more it will seem to use a specific style or vocabulary in its responses; however, it is easy to change its style and vocabulary by making a small adjustment to the prompt ('Write like a 10-year-old,' 'Rewrite this sentence,' 'Write in the style of Paul Auster,' 'Introduce a few spelling mistakes and grammatical errors,' etc.).







# 10

## AUTHORSHIP IN THE AGE OF ARTIFICIAL INTELLIGENCE

### 10.1. THE LEGAL SITUATION IN RELATION TO AUTHORSHIP

The integration of artificial intelligence into creative processes has generated much debate about the legal definition of authorship. There is currently no clear consensus in either society or among legal experts on how to address authorship when advanced technologies such as AI are involved in a creative work. It is a new phenomenon that is constantly changing and adapting.

These situations raise a series of questions:

- Who is the true author of a work created with the help of AI?
- Where does the person's contribution begin? And where does the machine's?
- How does the law recognise and support the contributions of each of the parties involved in a creative work?
- Do we need new definitions of creativity?

To date, no one has come up with a definitive answer to any of these questions,

and it is likely that as technology advances, legal and social frameworks will also have to continue to adapt.

In the meantime, it is important to remember that authorship is a concept that has been evolving for a long time now. In the educational field, how should we respond to this?

- **Promote transparency:** if AI is used to create a work, it is important to be clear about its origin and the contributions made by each party.
- **The ultimate aim of the work carried out by students is for them to learn:** in professional practice, it is the quality and efficiency of the outcome that really matters. In teaching, however, the aim is for students to learn as they complete their various assignments.
- **Promote a sense of ownership and effort:** regardless of the tools used, it is essential that students feel that the effort they make has meaning and value.
- **Develop a critical outlook:** teach students to reflect on the creative process and to be critical.

## 10.2. THE ROLE OF THE AUTHOR AND THE ROLE OF THE EDITOR

As stated earlier, AI use is changing how we understand authorship. Up until now, authors started with a blank page and constructed their work word by word, whereas since the advent of AI, the roles of author and editor have begun to merge. Nowadays, authors often become the editors of proposals generated by AI, and their job is to critically evaluate the content they receive, adapt it and edit it (or directly copy and paste it).

AI can provide us with drafts, ideas and structures that users can then modify according to their needs. This shift means that the creative process is no longer a solo undertaking, but rather a collaboration between human and machine. The author becomes the curator of the content, selecting and adapting the AI tool's suggestions to reflect their own vision and goals. In this new situation, it is important to keep two ideas in mind: 1) each person's individual experience, knowledge, skills and critical judgement will strongly influence the quality of the result; and 2) the more effort you put into a piece of work, the greater the likelihood of a better result and the stronger the feeling of ownership.

In the educational field, it is vitally important for each student to develop these competencies; consequently, students who have not yet developed this minimum set of skills should probably not be allowed to work independently with this type of technology.

### 10.3. THE PSYCHOLOGICAL IMPORTANCE OF OWNERSHIP

Feeling that something we have worked on is truly ours significantly influences our motivation and satisfaction. Psychologist Dan Ariely conducted an experiment that demonstrates this phenomenon. In his research, participants were divided into three groups and asked to complete a crossword puzzle.

1. Group 1: participants wrote their names on the crossword, and an evaluator corrected them in front of them.
2. Group 2: participants submitted their crosswords anonymously and the researchers shuffled them all in front of them.
3. Group 3: as soon as participants had handed in their crosswords, the researchers tore them up in front of them.

Even though all participants received the same financial payment for taking part, those in groups 2 and 3 stopped doing their crosswords much earlier than their counterparts in group 1. Experiments of this kind demonstrate that motivation is directly influenced by whether or not the work carried out has meaning and whether or not one receives recognition for it.

Another study found a direct correlation between the effort expended on a task and its final assessment. Although the final quality of the work is objectively the same, authors tend to value it more highly when they do it themselves (this cognitive spillover is called the *IKEA effect*).<sup>15</sup>

In the use of AI, it is therefore also essential to value the effort made by students and attach meaning and recognition to the work.

### 10.4. HOW TO ACKNOWLEDGE THE USE OF AI

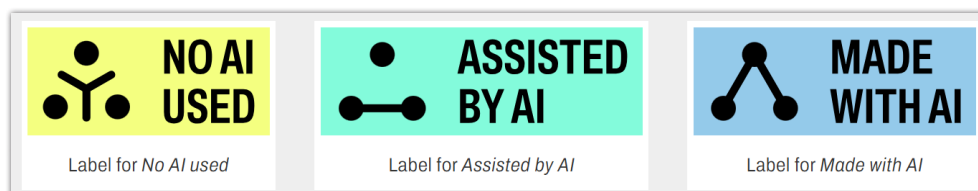
Teaching the different ways to cite AI tools fosters a culture of transparency. It also allows students to differentiate between their original contributions and AI-generated content.

Below are some suggestions for how students can cite their sources, based on the guidelines published by the APA,<sup>1</sup> the principal standardised citation model used in social sciences.

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15 Norton, M. I., Mochon, D., & Ariely, D. (2012). The “IKEA effect”: When labor leads to love. *Journal of Consumer Psychology*, 22(3), 453–460. <https://doi.org/10.1016/j.jcps.2011.08.002>  
Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford University Press.

- **Explain how you used the chatbot:** in the introduction or methods section, acknowledge the chatbot you used and explain how you used it to create certain types of content in your work.
- **Identify citations and provide the corresponding sources:** place those parts of the text you have copied directly in quotation marks. Then cite the source and the date in parentheses. For example:
  - *When prompted with 'Does diet or genetics have a greater influence on the health of gut microbiota?' ChatGPT responded that both diet and genetics influence microbiota health, adding: 'The impact of genetics and diet is still being researched, although the effect of diet is considered to be more adaptive and important' (OpenAI, 2023).*  
Reference: OpenAI. (2023). ChatGPT (14 March version, 2023) [O1 model].  
<https://chat.openai.com/chat>
- **Add the reference to the References section, using the following format:**  
OpenAI. (2023). ChatGPT (14 March version) [LLM model].  
<https://chat.openai.com/chat>
- **Include the full answers in an appendix, along with, where necessary, the prompts used.**
- **Whenever possible, cite the original sources:** if the AI tool mentions specific data or studies, check the original sources and cite them.
- **Acknowledgement icons:** if you want, you can use separate acknowledgement icons. For example:



<https://ai-label.org/> (public domain license))



# 11

## APPENDIXES

### I. APPENDIX: GLOSSARY

- ▶ **Bias:** partial perspective resulting from the nature of the AI training data used. For example, sexist or culturally limited answers.
- ▶ **Chain-of-Thought reasoning:** method used by artificial intelligence to reason in a step-by-step fashion. It is used by models such as ChatGPT's O1, mainly to help solve complex problems and issues.
- ▶ **Digital divide:** the difference that exists between human groups in terms of opportunities for using technology. For example, the gap between those who have access to AI tools and those who do not.
- ▶ **Data privacy:** mechanisms for protecting users' personal information. It is a good idea to familiarise yourself with the privacy settings for each of the tools used.
- ▶ **Deepfake:** images, videos or voices created with artificial intelligence that are often fake, manipulative or misleading.
- ▶ **Large Language Model (LLM):** an artificial intelligence system capable of producing and understanding texts. For example, ChatGPT.

- ▶ **Stochastic:** responses that are based on probability, rather than being precise or deterministic. This means that the same prompt may result in different answers every time.
- ▶ **Fine-tuning:** the process of adapting a model to specific data. For example, training a chatbot to use specific educational vocabulary so that it is more useful for teachers.
- ▶ **Hallucination:** when an AI tool gives incorrect or unrealistic responses.
- ▶ **Machine learning:** a method used by artificial intelligence to learn from large data sets in order to identify patterns.
- ▶ **Prompt:** a command or question used to make a request to an AI tool. For example, 'Write a text on climate change targeted at 12-year-old students.'
- ▶ **Temperature (creativity control):** a parameter that determines the creativity and randomness of the responses given. A low value indicates more precise and deterministic responses; a high value indicates more creative and random responses.
- ▶ **Context window:** the size of the window provided by each chatbot for entering prompts.
- ▶ **Token:** a small unit used to divide up text. A token can be a whole word, a word fragment or punctuation.
- ▶ **Chatbot:** a system of artificial intelligence-powered dialogues capable of responding to user questions or requests. NOTE ABOUT ORDER

## II: APPENDIX: ABOUT CURRENT LEGISLATION

The following legislation must be taken into account in relation to the processing of personal data based on consent: Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation). Article 8 of the GDPR regulates the conditions applicable to children's consent in relation to the services provided by the information society. In its first section, it states that:

*'1. Where point (a) of Article 6(1) applies, in relation to the offer of information society services directly to a child, the processing of the personal data of a child shall be lawful where the child is at least 16 years old. Where the child is below the age of 16 years, such processing shall be lawful only if and to the extent that consent is given or authorised by the holder of parental responsibility over the child.*

*Member States may provide by law for a lower age for those purposes provided that such lower age is not below 13 years.'*

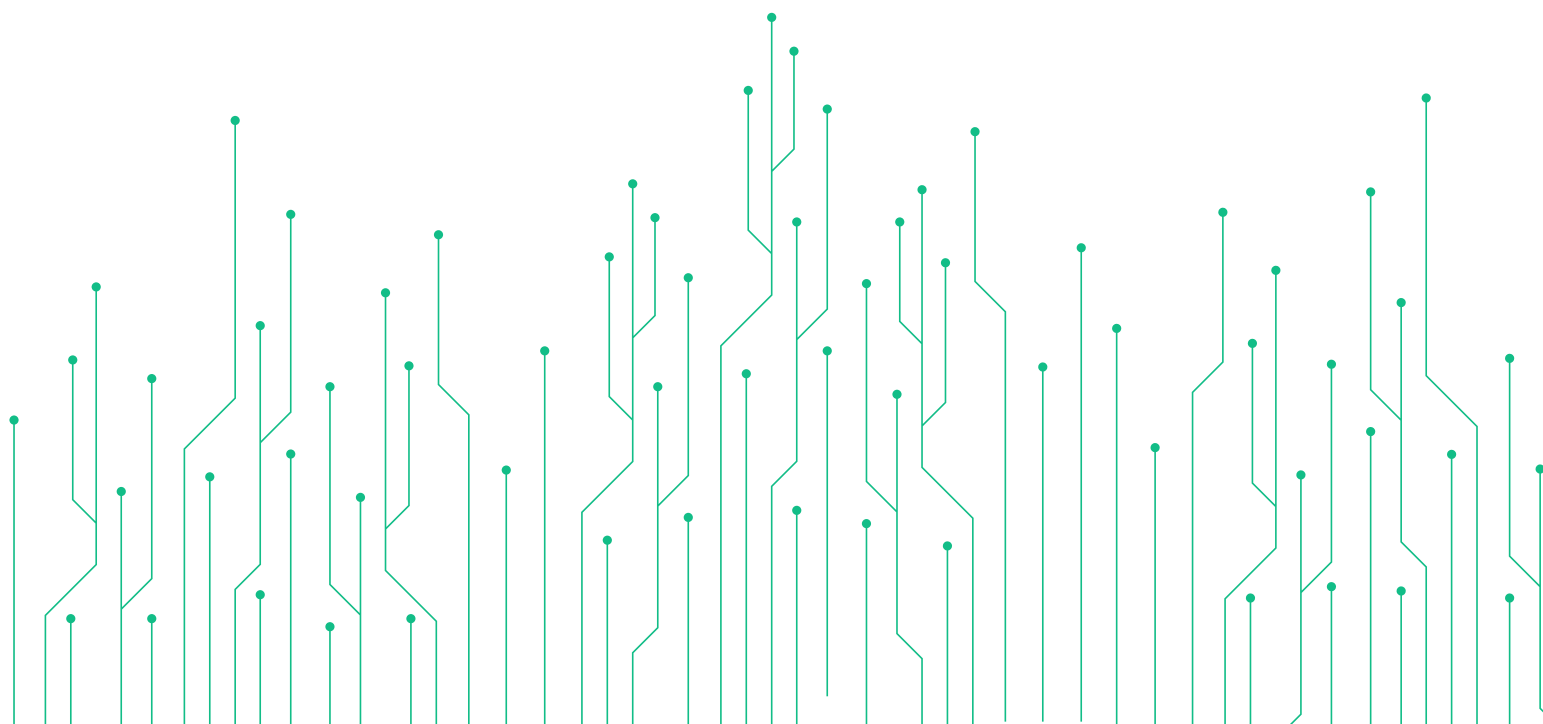
Furthermore, in Spain, Organic Law 3/2018, of 5 December, on the Protection of Personal Data and the Guarantee of Digital Rights applies. Article 7 of said Law regulates the consent of minors and limits said age in the following terms:

*'1. The processing of a minor's personal data may only be based on his or her consent when he or she is over fourteen years of age. Exceptions are those cases in which the Law requires the assistance of the holders of parental authority or guardianship for the execution of the act or legal transaction in the context of which the consent for the processing is sought.*

*2. The processing of data of minors under fourteen years of age, based on consent, shall only be lawful if the consent of the holder of parental authority or guardianship is given, to the extent determined by the holders of parental authority or guardianship.'*

These texts make it clear that the consent of minors is only valid in Spain from the age of 14 onwards.

Furthermore, it should be noted that in the education system, in general, the processing of students' personal data is not based on consent, but rather on legal obligation or public interest (specifically, on sections c) and e) of article 6 of the GDPR). The bodies responsible for said processing are: the schools themselves in the case of semi-private subsidised schools, and the Education Department in the case of public schools.





### III: APPENDIX: TECHNOLOGY FOR RESPONDING TO TEACHERS' NEEDS: A TOOL FOR ENCOURAGING REFLECTION

To effectively integrate artificial intelligence into teaching, it is important to identify the needs of both teachers and students. To do this, every teacher should conduct a needs assessment to decide which needs AI will be used to address (taking into account the red lines outlined in this guide).

To this end, we suggest using the reflection tool outlined below to trigger an in-depth discussion with colleagues.

#### 1. Analyse your daily practice

**Activity:** take a moment to think about your daily teaching practice and answer the following questions:

- Which tasks require the most time and effort?
- Which tasks are repetitive or administrative, limiting time available for creativity?
- In which areas do you think you need more resources or support?

#### 2. Identify your priority needs

**Activity:** identify your needs and prioritise them (1 = highest priority):

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

### 3. Some tasks that can be performed with AI

Mark those needs that are important to you in the list below:

- ☐ Planning how you will teach your subjects and creating materials
- ☐ Writing assessment questions
- ☐ Giving explanations and quick instructions
- ☐ Language learning support and translations
- ☐ Responding to special educational needs
- ☐ Supporting teachers' professional development
- ☐ Streamlining routine communications
- ☐ Facilitating classroom debates
- ☐ Designing customised learning pathways
- ☐ Gathering student feedback
- ☐ Others

### 4. Using AI technology to meet your needs

**Activity:** based on the needs identified above, think about how AI technology can help you:

- Can repetitive or time-consuming tasks be automated using AI?
- How can AI facilitate student assessment or customised feedback?
- Is there a specific AI tool that meets your needs?

### 5. The AI of the future: opportunities and limits

**Activity:** think about how AI technologies may develop in the future:

- What needs cannot yet be met by AI, but may be in the future?
- Regarding your specific needs, what technologies or developments are underway?
- How can you get ready to integrate these future technologies into your teaching process?

### 6. Safeguarding the human aspect

**Activity:** think about how we can protect the human side of things while still using AI technology:

- How can you safeguard empathy and caring relationships?
- What strategy can you use to promote the development of social-emotional skills in AI use?

## 7. Developing an action plan

**Activity:** based on your reflections, create an action plan:

- What steps will you take to test or integrate AI technologies into your practice?
- What resources or training will you need to do this?
- How will you measure the impact of AI technology on your teaching?

## 8. Sharing and collaborating

**Activity:** share your findings with your colleagues:

- Do they have similar needs?
- Can you work together on AI technologies?
- How can you design a strategy for integrating AI in your group?

### Student questionnaire for diagnosing AI use

1. How often do you use generative AI tools (ChatGPT or similar) for your schoolwork?

- Never
- Rarely
- Sometimes
- Often

2. What tools have you used already in your schoolwork?

3. What have you used generative AI tools for in your schoolwork? (select as many as you like)

- Brainstorming
- Finding information
- Writing drafts
- Editing or proofreading texts
- Completing whole assignments
- Creating images or videos
- Other tasks (please specify)

4. How often do you use generative AI tools for extracurricular projects or personal interests?

- Never
- Rarely
- Sometimes
- Often

5. Do you think using generative AI tools can help you learn better?

- Yes
- No
- Not sure

6. Are you aware of the ethical issues involved in the use of generative AI tools at school (plagiarism, for example)?

- Yes
- No
- Not sure

7. If you use AI in your schoolwork, do you know how to acknowledge it, if your teacher asks you to?

- Yes
- No
- Not sure

8. Has the use of generative AI changed the way you work? If so, briefly explain how.

9. What do you think are the main benefits for students of using generative AI? Please provide a brief explanation.

10. What do you think are the main risks or challenges for students of using generative AI? Please provide a brief explanation.

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