

# Decalogue for safe artificial intelligence (AI) in university courses



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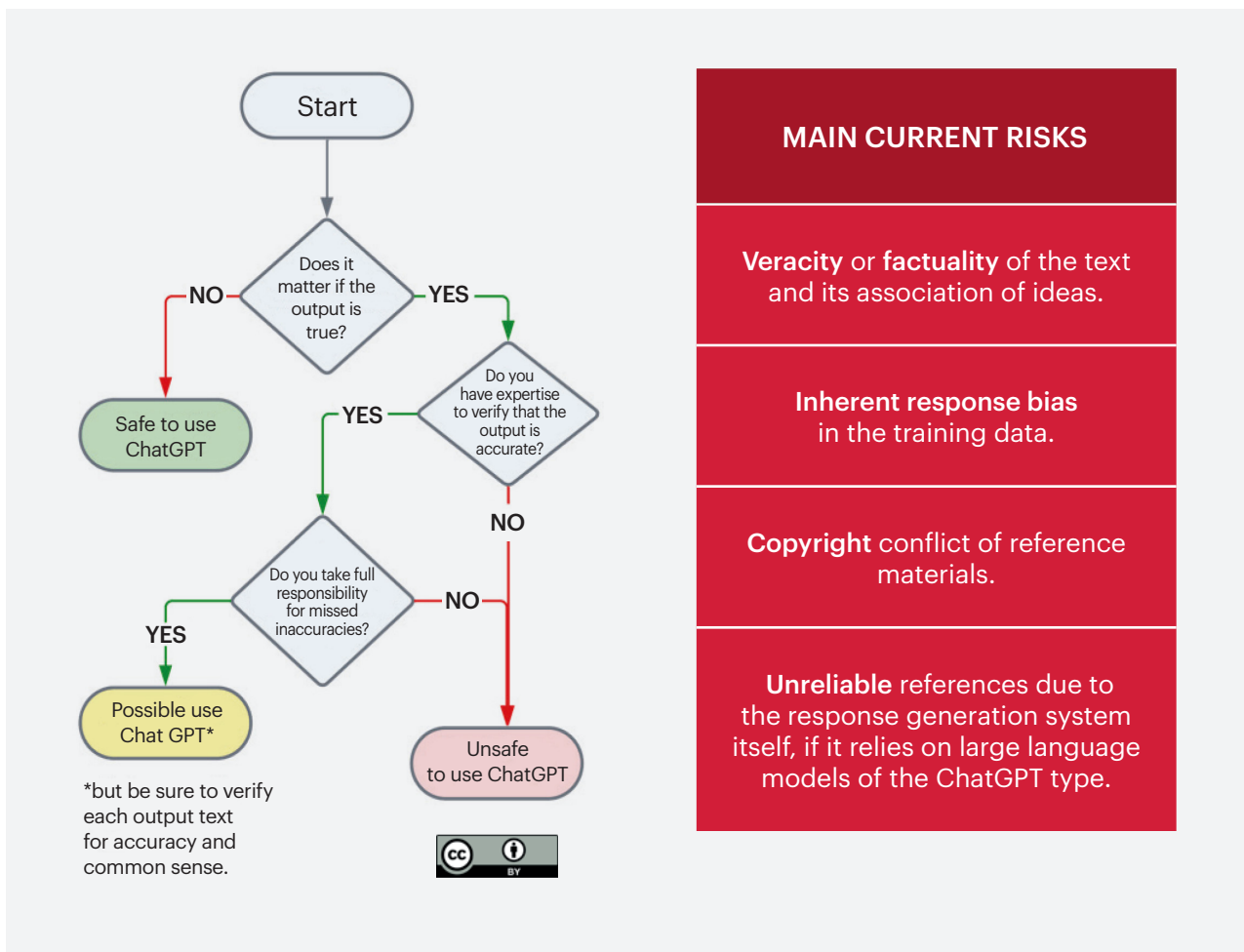
## Dialogue as the basis of learning

Universities are communities of learners where teachers, students and professionals learn from each other at different times and stages. The basis of learning is often a dialogue between people, and also interaction with teaching resources; a dialogue that, the richer and more diverse it is, the more useful it will be, facilitating learning for those involved.

Recently, a new instrument has become popular, tools based on artificial intelligence (AI), in particular generative large language models, such as ChatGPT and similar tools, which can distort this dialogue.

## Analysis of the main risks

The UNESCO 2023 guide on ChatGPT and its use in higher education [1] includes a flow diagram that indicates when it is safe to use ChatGPT and when it is not. We have copied a table of the main risks involved in similar tools:



## Decalogue

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### 1. We cannot ban the use of AI-based tools in teaching.

Students will mainly use ChatGPT (or whatever AI-based resource they have available) to reduce the workload; many will use it even if they have to pay or it is explicitly banned, especially if it gives them good results. The first thing to bear in mind is that any attempt at an absolute ban is doomed to failure. In all likelihood they will pay no attention to the ban and use will go undetected.

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### 2. We need to explore AI-based tools that are relevant to each field of study.

We need to explore other AI-based tools, as well as ChatGPT and derivatives in each discipline. Sometimes tools are suited to a certain area of knowledge, providing resources and ideas that reinforce the deep learning of students, or they make it possible to go further in the limited time available for each subject. Some of these tools could be excellent 24/365 virtual assistants for students.

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### 3. There are no reliable tools for detecting the use of AI.

Teachers should be aware of the potential of using these types of tools in activities with students, especially when the individual work of students counts towards final grades. If we discover that some proposed activities can be carried out automatically with an AI tool, then we face a serious challenge. It is difficult to detect if academic fraud has occurred. (The assurances of reliable detection of the diverse tools available are unreliable and limited to English in the case of ChatGPT. [2]) Therefore, it is best to devise a strategy to ensure that students attain learning outcomes for each activity, in terms of knowledge, skills and competences.

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### 4. Teachers and students should together analyse the present and future impact of AI.

Teachers and students should together analyse the present and future impact of AI. AI-based tools will play a role in students' professional and personal future. They will affect many professions and create new professional profiles. We need to reflect together on this impact: how it affects students now, appealing to students' sense of ethics, to their academic integrity and to their personal prestige, at this pre-professional period of their careers. At this stage, as students they should acquire and consolidate knowledge, skills and competences. It is also worth analysing how AI may affect them in the immediate future. This much-needed reflection can feed into analysis of future prospects, together with teachers, and give rise to enriching proposals for all.

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### 5. We need to review the learning outcomes of each subject and of the degree course as a whole.

We need to review which learning outcomes students should reach by the end of each subject and how they are linked to those of the degree course as a whole. This should be done with appropriate depth in each case, taking into account the impact of AI-based tools. We should analyse which training activities, teaching methodologies and evaluation techniques can support student progress, and ensure that the process is beneficial for all.

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### 6. Let's move towards genuine formative assessment, based on close ongoing contact with students.

The best resource available to teachers is to strengthen links with students. We need to gain students' trust, know about their progress and give them adequate ongoing feedback on their strengths and weaknesses, not just at the end of each subject. We need to make formative assessment a reality and establish mechanisms to enhance close links with the maximum number of participants. Through this trust and individual relationships it should be easier to detect the potential and the risks of AI-based tools in student learning.

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## 7. We should ensure that assessment activities measure the knowledge, skills and competences of students.

Depending on the degree of knowledge and confidence of each teacher in the use of AI-based tools, we could decide that certain assessment activities, in particular the most vulnerable, should be carried out without resort to AI. It is important to ensure that the answers, arguments, reflections and productions of students show their own knowledge and skills, and if it has not been explicitly specified that AI can be used, their work should not always be mediated by AI technology. We should also ensure that student work is properly referenced [3]. We should consider unrestricted use of these tools in key assessment activities only once their use in less important activities has been explored in some depth and with satisfactory results. We need to ensure that students achieve the declared learning outcomes.

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## 8. We recommend a progressive introduction to the use of AI tools.

If the teaching team does not feel comfortable with these tools, they can be tried out in less important activities first. Proceed with caution, initially in few activities with suitable support and dialogue. The aim is for teachers and students together to assess the advantages and drawbacks involved.

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## 9. We need to create reference teaching teams in each field of knowledge.

We need to create reference teaching teams, especially in fields where technology has been less used which are now particularly vulnerable to the impact of AI tools, in order to be able to respond to needs and carry out the required training.

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## 10. We should explore how students can use AI tools as 24/365 virtual assistants.

Before recommending these tools as 24/365 virtual assistants for students, it seems prudent to wait for conclusive evidence that they can be leveraged in this role. This opens up a range of research possibilities that could provide useful results for teaching teams.

### References

[1] ChatGPT and Artificial Intelligence in higher education. Quick start guide. UNESCO Guide 2023  
[https://www.iesalc.unesco.org/wp-content/uploads/2023/04/ChatGPT-and-Artificial-Intelligence-in-higher-education-Quick-Start-guide\\_EN\\_FINAL.pdf](https://www.iesalc.unesco.org/wp-content/uploads/2023/04/ChatGPT-and-Artificial-Intelligence-in-higher-education-Quick-Start-guide_EN_FINAL.pdf)

[2] <https://www.ft.com/content/d872d65d-dfd0-40b3-8db9-a17fea20c60c>  
<https://dfmas.df.cl/df-mas/tecnologia/universidades-dudan-sobre-herramienta-para-detectar-el-plagio-de>  
<https://openai.com/blog/new-ai-classifier-for-indicating-ai-written-text>

OpenAI states that "our classifier correctly identifies 26% of AI-written text (true positives) as "likely AI-written," while incorrectly labeling human-written text as AI-written 9% of the time (false positives)". This means that it is not a useful tool for detecting plagiarism or AI-generated text, and its detection rate is worse in languages other than English.

[3] Guide to preparing bibliographic citations in APA format, 7th edition: 3rd ed. revised and expanded: September 2023. Based on the Publications Manual of the American Psychological Association. UVic-UCC. Library, 2023.  
<http://hdl.handle.net/10854/7503>