

Artificial intelligence (AI) tools – common questions and concerns

What is artificial intelligence (AI) and ChatGPT?

The simple answer is that Artificial Intelligence (AI) are software tools—with ChatGPT being one example—that can respond to a request (or prompt) with an answer that creates a humanlike conversational dialogue. So, for example, if an AI tool is asked “What started World War 2?”, then it would provide several, detailed paragraphs—just as if you had asked a human that question.

AI tools such as ChatGPT are different to search engines which direct you to webpages that could answer your question.

Dramatic improvements in AI tools have taken place over the last few months and many people have been surprised at the quality of what they can produce. Though others see it as superficial and there are many questions around its limitations, accuracy and bias.

What is “prompt engineering”?

One very important skill that can be taught through AI tools has been termed “prompt engineering”, or the process of choosing the correct prompts so that AI tools will produce the content the user wants. Prompt engineering supports effective questioning, understanding, and vetting the information these tools produce, and then refining the answers to make them accurate and reflective of what the user wants to express. It is a form of assisted inquiry. The practice of recording prompt histories also helps teachers with in-class assessment and students to learn how to better use AI tools.

AI tools make it easier than ever for students to cheat, won't they just get the tool to do the work for them?

While one use of AI can be for a student to ask it to answer their homework (or coursework) question and hand in its answer, this is not the biggest challenge or opportunity of AI.

AI will probably change the world in many ways. One of the most powerful will probably be allowing people to have the tool to write them a report based on a few key points. However, think about asking someone else to write your report for you. You would appreciate the importance of reading it, and probably editing it before you sent it over to your boss. Maybe, if the person you asked to write it for you was as good as you it would be perfect, but if they did not understand the context, or they were biased then you would want to be very clear with them what you wanted them to write, and probably give them feedback several times. This is the likely world of AI, where it will be able to write, produce images or suggest answers, but you will want to review, redraft, and edit repeatedly to make it what you want to say.

These skills are what students need to learn to use AI ethically and safely in the future.

Artificial intelligence tools should be banned in education because it can do a student's work for them.

The IB does not believe that AI tools should be banned in education. Firstly, these tools will become more common and more powerful. Trying to ban them or ignore them will just make the transition more difficult when they truly become mainstream. Secondly, as these tools will be part of the world our young people will need to be part of in the future education needs to equip them to deal with them competently and ethically. Finally, while the software could appear to be a shortcut to completing work, the purpose of education is to learn from doing, not just to do. Therefore, we should not be focused on whether the student spent the time to write an essay, produce a piece of art or even done the research, it is what the student has learnt by doing it that is important.

In the same way that a student can learn even when given help by a teacher to complete a piece of work, it is equally possible that a student can learn from receiving support from AI. Our challenge is to make sure this happens, and young people do not see it as an alternative to the learning process.

When the purpose of a task is to assess the student rather than to support their learning then we need to be sure that what the student is being assessed on is their own work and not someone else's, or the product of AI.

Artificial intelligence tools such as ChatGPT are not a source, so how should IB students cite the use of this software in their work?

The IB is not suggesting that AI is a source in the traditional sense, but we are seeking transparency. A student is being transparent if they clearly indicate where they use text which they have copied from elsewhere.

A short guide to the use of artificial intelligence tools in the IB, including how to correctly reference and maintain academic integrity can be found [here](#).

There are concerns around the inaccuracy and biases of AI tools, so why are we allowing students to use them?

This is the most important point to teach students about Artificial Intelligence. AI tools are only as good as the material that has been used to train it. Therefore, if all its information is biased, then what it produces will reflect that bias. Consider what you would conclude if you only read articles from the internet—this is often the basis of what artificial intelligence software is using—so yes, there is a danger that anything produced by this software will be biased and/or inaccurate.

This means that students must learn to be **critical** readers of information produced by artificial intelligence. They must look for evidence of bias, oversimplification or only considering one side of the argument. They should try using other "prompts" to see if this changes what the software produces and should use AI in conjunction with other sources to get a balanced picture.

These are the skills that IB students should be using with all sources of information. The IB learner profile is based on the principles that there are multiple viewpoints and opinions and that students should engage with this understanding.

Remember, artificial intelligence should be used as part of research, not used to produce the work for the student.

Is there a safeguarding risk from Artificial Intelligence?

Depending on what sources the AI tool has been trained on, it could produce information and opinions which are disturbing or even inappropriate for students. This exactly reflects the risks of allowing students use of the internet, or even a library which has not curated its material to be safe for students.

What should we do about the age of consent being 18 for most AI tools?

Schools are responsible for ensuring that they meet legal requirements for their students. All terms and conditions must be read carefully, as for example, ChatGPT requires parental permission for anyone between the ages of 13 and 18. However, students can still be taught the principles of ethical use of AI without actually using the tools online. For most of the learning objectives around bias, improving responses and why AI sometimes gives the wrong answer, only the teacher needs to demonstrate the use of the tool.

Are there examples of how to use AI in lessons?

The IB has provided two TOK classroom tasks to inspire you to think about how to use it in this context here and is currently working on further examples to support our educators.

What are other educators saying about Artificial Intelligence and education?

Here are some websites that provide further reading and examples around the use of AI in education:

- The Western Academy of Beijing: <https://learn.wab.edu/innovation/ai/ai>
- [How AI can transform education for students and teachers | World Economic Forum \(weforum.org\)](https://www.weforum.org/articles/2023/02/how-ai-can-transform-education-for-students-and-teachers/)
- [AI for Educators - Artificial Intelligence in Teaching and Learning - University of Bolton Library at The University of Bolton](https://www.boltonlibrary.com/ai-for-educators/)
- [The AI revolution already transforming education | Financial Times \(ft.com\)](https://www.ft.com/content/2023/02/21/the-ai-revolution-already-transforming-education)
- [The Future Of Education - Disruption Caused By AI And ChatGPT \(forbes.com\)](https://www.forbes.com/sites/eric-lipton/2023/02/21/the-future-of-education-disruption-caused-by-ai-and-chatgpt/)
- Pearson blog (in Spanish): <https://blog.pearsonlatam.com/educacion-del-futuro/5-aplicaciones-de-la-inteligencia-artificial-en-la-educacion>
- Eduteka (in Spanish): <https://eduteka.icesi.edu.co/articulos/KNUST-como-usar-chatGPT-en-el-aula>
- Additio (in Spanish): <https://additioapp.com/como-usar-el-chatgpt-de-openai-para-educacion/>
- WIRED article (in Spanish): <https://es.wired.com/articulos/chatgpt-llega-a-la-escuela-pero-no-hay-nada-que-temer>
- EDUCACIÓN 3.0 (Spanish): <https://www.educaciontrespuntocero.com/tecnologia/chatgpt-en-el-aula-ideas/>
- OtrasVoces en Educación (Spanish): <https://otrasvoceseneducacion.org/archivos/401370>
- [Guide de l'enseignant L'usage de ChatGPT « ce qui marche le mieux » - Innovation Pédagogique \(innovation-pedagogique.fr\)](https://www.innovation-pedagogique.fr/guide-de-l-enseignant-l-usage-de-chatgpt-ce-qui-marche-le-mieux/)

What are other policy makers saying about Artificial Intelligence (AI) and education?

- UNESCO: Artificial intelligence in education
- <https://www.unesco.org/en/digital-education/artificial-intelligence> (Multiple languages)
- CSE Quebec: L'intelligence artificielle en éducation : un aperçu des possibilités et des enjeux
- <https://www.cse.gouv.qc.ca/wp-content/uploads/2020/11/50-2113-ER-intelligence-artificielle-en-education.pdf> (French, English)
- <https://scioteca.caf.com/handle/123456789/1928> (Spanish)

I want to do some further research around artificial intelligence tools, where should I start?

The IB recommends the below websites for further reading around the topic of artificial intelligence:

- <https://www.bbc.co.uk/newsround/64210050>
- <https://www.britannica.com/technology/artificial-intelligence/Methods-and-goals-in-AI>
- https://en.wikipedia.org/wiki/Artificial_intelligence
- <https://computerhoy.com/reportajes/tecnologia/inteligencia-artificial-469917> (Spanish)
- <https://www.deseret.com/2023/1/23/23562681/chatgpt-artificial-intelligence-critical-thinking-dark-ages>
- <https://www.theguardian.com/technology/2023/mar/16/the-stupidity-of-ai-artificial-intelligence-dall-e-chatgpt>
- <https://eduteka.icesi.edu.co/articulos/sanchez-ia-y-educacion>
- <https://www.educaciontrespuntocero.com/noticias/inteligencia-artificial-en-la-educacion/>
- <https://www.nobbot.com/que-hacemos-con-chatgpt-en-el-aula/>