THE IB AND ARTIFICIAL INTELLIGENCE (AI) TOOLS

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WHY IS THE IB ALLOWING STUDENTS TO USE AI TOOLS?

Students at IB World Schools are provided with a unique, challenging and diverse education. They are encouraged to drive their own learning and to think critically and challenge assumptions.

The IB understands that there will be many reservations about allowing the use of Chat GPT and other artificial intelligence tools in IB World Schools. However, we believe that these tools can provide great opportunities to enhance the skills of IB learners. Critical thinking, for example, is a skill that will grow in importance when using artificial intelligence tools. We therefore need to work with these tools, rather than against them, and embrace what the technology is capable of. The IB strongly believes that we should find appropriate ways to include such tools in teaching and assessment, which are complementary with learning aims.

HOW CAN STUDENTS MAINTAIN ACADEMIC INTEGRITY WHEN USING AI TOOLS?

Opportunities created by AI tools reinforce that academic integrity is an ethical choice that students must make. Students cannot learn about acting with integrity by being given a list of rules for the examination room or learning a particular format for referencing. They learn by talking about what it means to act with academic integrity and seeing it role-modelled around them.

The goal of academic integrity is to make knowledge, understanding and thinking transparent. Students must understand how to correctly reference and ethically use any external information in their work, including text/images obtained from artificial intelligence (AI) tools.

For the IB, **transparency** is the key, and we expect students to give full credit to any source/material that they have used when writing and creating their own work.

HOW DO STUDENTS CORRECTLY REFERENCE AI TOOLS?

In any type of work where an external source has been used, a citation must be included at the point of use. The inclusion of a reference at the end of the paper is not enough. The citation in a text should link to a full reference in the bibliography.

Students should be clear that if they use the text (or any other product) produced by an AI tool—by copying or paraphrasing that text or modifying an image—they must clearly reference it in the body of their work and add the reference in the bibliography.

The in-text citation should contain quotation marks using the referencing style already in use by the school, for example: *"the development of the tools and variables required for………"* (text taken/paraphrased from ChatGPT, 2023).

The reference in the bibliography should also contain the prompt given to the AI tool and the date it generated the text, for example: OpenAI. (23 February 2023). ChatGPT response to *example* prompt about *example* topic.

HOW ARE ARTIFICIAL INTELLIGENCE TOOLS ADDRESSED IN THE UPDATED ACADEMIC INTEGRITY POLICY?

The Academic Integrity policy has been updated and is now available on the Programme Resource Centre. There is a new appendix (6) – *Guidance on the use of artificial intelligence tools*. This section will help schools to support their students on how to use these tools ethically, in line with the IB's principles of academic integrity.

Evaluating 13 scenarios of AI in student coursework

Here are thirteen different situations that teachers may find themselves in with students using artificial intelligence (AI) in their IB coursework and some suggestions on how the teacher should respond.

Remember that there are no hard rules when dealing with AI. Educators should use their discretion with each student. If in doubt, refer to the following key principles:
1. Did the student use AI to help them learn, if so then it is OK.
2. Did the student use AI to pretend they did something they did not, then this NOT OK.

In other words, if something is fundamentally not the student's own work—according to the teacher—then it should be referenced. If they copied or paraphrased another source, for example, they need to cite the source. And if this means all the work is one long reference then they receive no credit for it when assessed against criteria that require understanding, analysis, evaluation, etc.

As AI develops, it is important that schools provide students with clear guidelines on what ethical use of AI looks like. To help students see AI as a tool for learning, not just a tool for teaching, we suggest that schools make this AI policy separate to their academic integrity policy.

We also suggest that schools put together an AI policy for teachers setting out what is acceptable practice for teachers in the classroom and when interacting with others. This should ideally be focused on positive statements of what good looks like to build confidence in how teachers can use AI.

It is the school's responsibility to authenticate any student work submitted to the IB as wholly created by the student. While plagiarism can be checked using online tools, identifying the use of artificial intelligence, such as purchasing an essay, requires knowledge of the student. The teacher is best placed to deliver this intel. The IB only expects teachers to do their best in this area.

#1 Student asks AI for a summary of key points for the essay and some references to cite and then reads these sources to understand them.

As the teacher, make sure that the student truly understands the points that are being made, but this is fundamentally an acceptable way of using AI. Think about it like talking to a teacher or tutor about the essay and getting some thoughts and references to look at.

It is not acceptable to copy and paste from AI without referencing this is where it came from. We would expect the student to write these points in their own way having reviewed all the sources.

#2 Student asks AI for a summary of counter-positions or alternative viewpoints in response to a question or issue, and the student explores these further.

Alternative viewpoints and different ways of thinking are key for students. Teachers and supervisors should ensure that students understand the role of AI in this process to glean viewpoints and positions that they may not be aware of and explore these further, broadening their awareness of the topic or issue. Students can then work with their teacher or school librarian to devise a research approach that builds on the ideas generated by AI, e.g. through focussed searches that use the key terms outlined by AI.

Good practice would be that the student used the ideas offered by AI to investigate and understand the alternative view. This is similar to students looking in a textbook to find ideas for the counter-positions and then investigating them.

It is not acceptable for the student to just present the arguments as presented in the textbook, or as written by AI.

#3 Student asks AI to give them some quotes from sources on the essay topic and just copies these quotes (properly referenced) into their essay without investigating further.

This is not acceptable. The student is not using AI to identify sources to investigate, but is using AI to replace part of the thinking process. The student should go to the references identified by the AI tool, read and understand them, and then decide what to quote in their essay.

If the teacher is not sure if a student has actually read and understood the sources, it is perfectly acceptable to ask the student about these sources to test their awareness of the material, not just the conclusion they have drawn from it.

To be clear, it is not enough for the student to make it clear that they got the references from AI, they must actually read the references.

#4 A student instructs AI to develop a research question grounded in an IB subject for investigation, with or without elaboration on a topic area.

This is not acceptable. The student should talk to their teacher not AI in this scenario.

Teachers and supervisors should always ensure that coursework evolves from the natural interests of students. Where coursework allows a broader choice of focus areas (e.g. the extended essay, reflective project or personal project), students can sometimes find it difficult to narrow down a focus area. A student should work with their teacher or supervisor to identify the subject and topic of interest and may instruct AI to provide examples of research questions in this area.

Students, together with their teachers and supervisors, must then reflect on the questions considering the criteria requirements, further amending the proposal to the specific area of personal interest. This is not dissimilar to reviewing past essays/projects in a school library for inspiration.

#5 Student gets AI to write an example of this particular essay for them and uses this as an example or a model answer for their response (translating it into their own words).

This is not acceptable. As the teacher, how would you feel if the student had found an essay on a topic on the internet, or borrowed an essay from a friend who did it for you last year then used that work for all the ideas for their essay? Treat this misuse of AI in the same way.

The best approach is to give the student a viva/oral quiz on the arguments and content of the essay. If they clearly understand it all then instruct them that good practice is to use AI for general research and not a narrow answer. Teach them that using AI in this way misses wider learning opportunities, but allow the student to submit the work without penalty.

It is not acceptable if they cannot explain the content. In this case, treat it is as copying someone's work.

#6 Student gets AI to write them a paragraph or two for the essay, such as the introduction or summarising an argument and then used this as a model of what to write (in their own words).

As the teacher decide if the student has used AI to think for them or provide an example for them to refer to. Generally, it will be the latter and so is acceptable. Think about the student looking at other examples of essays (on different topics) to get a sense of what a good introduction looks like.

Be very cautious if it is the final summarising paragraph as that is where much of the student's thinking will be displayed.

#7 The student writes an essay, puts it into AI and asks the tool to rewrite it for them.

Generally speaking, this is not acceptable, and the teacher should mark the original essay. However, this is a key area where the teacher's judgement comes into play.

If the purpose of the essay was the research and thinking behind it, then maybe understanding why the student felt the need to get AI to rewrite it would spark a meaningful opportunity to discuss what is important in learning with the student.

We want teachers to take a hard line on this with IB assessment tasks and say the student must submit their original essay, but teachers should exercise more discretion when engaged in in-class work.

#8 The student writes the essay in one language and then uses AI to translate it into another language to hand it in.

This is not acceptable for IB summative assessments because we certify that the student took the subject in a particular language, and universities and employers may use that to assume the student can write the essay in that language.

While this example talks about "the essay" the same principles apply to any text in an IB assessment including presentations etc.

For school contexts where there is no indication of language, then acceptability depends on the school's views. Obviously if the subject is language acquisition, then it is not acceptable to use AI translations.

#9 The student uses an AI to suggest improvement to their grammar and sentence construction but not a wholescale rewrite.

Unless there are marks for the quality of grammar etc then this is acceptable, but as the teacher it would be good to have access to the original version to be sure what changed. Good practice would be for the student to state somewhere (at least to the teacher) that they have used digital tools in this way.

If the "coherence of the argument made" is improved by the use of AI, then this would typically fall into the "wholescale rewrite" category, but this is an area for teacher discretion.

#10 The student uses AI to "mark" their work and provide feedback so they can improve.

This is another case where the teacher's judgement and context is really important. For IB assessments this use of AI is discouraged because it effectively breaks the "one set of written feedback" rule. We think the teacher is better placed to provide that feedback than AI.

In a less high stakes environment then maybe this is excellent education as if the only marking was by the teacher the student would not then rewrite their work based on the feedback, learning from their mistakes. It is also an opportunity to reflect critically on the reliability and meaningfulness of the feedback provided by AI. What are the strengths and limitations of asking it for feedback in a particular way?

#11 The student asks AI to "reflect" on a topic, process or question, then use this unchanged in their assessment.

This is not acceptable. Reflection requires students to think about the process they have been through, evaluate it, and decide what – for them – has had value, and what they can learn from the experience. Using an AI-generated reflection is not appropriate, and teachers and supervisors have a key role in ensuring that students are benefitting from the opportunity to reflect authentically on their own personal learning.

Teachers and supervisors attest to authenticity when they upload work for assessment and submitting an AI-generated reflection would constitute fabrication.

#12 The student tries to hide that they used AI.

This is not an acceptable situation. Part of ethical use of AI is being clear and transparent where you have used it. This means telling the teacher who is authenticating the work for the IB even if it does not need referencing. This is not acceptable, even if the actual use of AI was acceptable.

#13 The student uses AI tools to generate a template for the structure of their essay.

If a student uses AI tools to generate a template for the structure of their essay and then follows the prompts within the template to complete the information required, it is not academic misconduct if the student acknowledges the use of AI tool when submitting their work for assessment.

Think about this in the context of student using other resources, such as example essays or textbooks to obtain a framework for their essay.

If the teacher has any doubts/concerns, as mentioned earlier, the best approach is to give the student a viva/oral quiz on the arguments and content of the essay.

Advice for teachers

1. It is strongly recommended that teachers instruct students to retain the developmental work (i.e. plans and drafts) that they have produced when working on their assignment. This will allow the students to demonstrate, if requested, the process they undertook to produce the work submitted for assessment.

    For example, if they used AI tools for initial research on the essay topic, students should keep all the information generated. Then, through a version history it can be shown how the work was developed from initial content research to the creation of independent work.

2. Consider the parallels with familiar situations when considering the impact of AI. Is using AI to obtain an example essay any different from a teacher sharing exemplar work or students finding examples on the internet or in their school library?

3. Trust your instincts, you know your students and will know whether they have produced the work or not.

    If there is any doubt about whether the students work has been produced by an AI, the best approach is to run an oral exam/viva with the student to see if they understand what they have written.

4. Teachers do not need to "prove" that artificial intelligence or someone else wrote the student work. It is reasonable to ask questions to be confident the work is authentically the student's own. The IB will support you in your right not to authenticate student work, and good practice where there is in doubt is to allow the student to redo the task in controlled conditions.

Remember, a student using AI to support their learning is good, while using AI instead of learning or to submit work that this not their own is wrong.

Advice on Referencing Artificial Intelligence

(from annex 6 of IB Academic Policy — https://resources.ibo.org/ib/topic/Academic-honesty/works/edu_11162-58121?lang=en&root=1.6.2.10.15)

"Students should be informed of the following rules.

*   If they use the text (or any other product) produced by an AI tool—be that by copying or paraphrasing that text or modifying an image—they must clearly reference the AI tool in the body of their work and add it to the bibliography.
*   The in-text citation should contain quotation marks using the referencing style already in use by the school and the citation should also contain the prompt given to the AI tool and the date the AI generated the text.

The same applies to any other material that the student has obtained from other categories of AI tools—for example, images."

We also suggest:
*   Students include the prompts they used in the reference
*   Students provide a transcript of their use of AI as an annex for their teacher

The purpose of referencing the use of AI is to be transparent about what is the student's own work and what they have taken from elsewhere. Therefore the focus for the IB is not on "correct citation" of AI but on being transparent.

This also applies if the student has used AI in a way which is not directly used in the text. A short statement after the end of the work describing how AI was used in the creation of this work is sufficient.

Summary Table of points

Scenario	Outcome
#1 Student asks AI for a summary of key points for the essay and some references to cite and then reads these sources to understand them.	OK
#2 Student asks AI for a summary of counter-positions or alternative viewpoints in response to a question or issue, and the student explores these further.	OK
#3 Student asks AI to give them some quotes from sources on the essay topic and just copies them (properly referenced) into their essay without investigating further.	Not OK
#4 A student instructs AI to develop a research question grounded in an IB subject for investigation, with or without elaboration on a topic area.	Not OK
#5 Student gets AI to write an example of this particular essay for them and uses this as an example or a model answer for their response (it in their own words).	Context – but not OK
#6 Student gets AI to write them a paragraph or two for the essay, such as the introduction or summarising an argument and then used this as a model of what to write (in their own words).	Context – but OK
#7 The student writes an essay, puts it into AI and asks the tool to rewrite it for them.	Not OK – but nuanced
#8 The student writes the essay in one language and then uses AI to translate it into another language to hand it in.	Not OK for IB assessment Probably ok other contexts
#9 The student uses an AI to suggest improvement to their grammar and sentence construction but not a wholescale rewrite.	OK in most contexts
#10 The student uses AI to "mark" their work and provide feedback so they can improve.	OK in most contexts
#11 The student asks AI to "reflect" on a topic, process or question, then use this unchanged in their assessment.	Not OK
#12 The student tries to hide that they used AI.	Not OK, even if their use of AI was ok
#13 The students uses AI tools to generate a template for the structure of their essay.	Context – but ok