

# Developing artificial intelligence capabilities

## Guidance for students and parents/carers

---

Understanding what artificial intelligence (AI) technology is, its strengths and limitations is important to help ensure students have the 21st century skills needed to become discerning global citizens. You can use this understanding to strengthen your decision-making, critical and creative thinking, and problem-solving skills when considering the use of AI and generative AI tools.

## Ethical scholarship and generative AI

Recognising the importance of ethical scholarship and academic integrity will enhance your opportunities for lifelong learning, certification, employment and university entry.

Acting with integrity:

- means acting morally and ethically
- builds trust and respect
- requires the demonstration of academic responsibilities that adhere to school procedures and guidelines
- emphasises the importance of honestly representing your learning and valuing the completion of your own authentic work.

If you use generative AI tools and present the work as your own, you put your integrity at risk and may bear the consequences of such academic misconduct as plagiarism or a lack of referencing, fabrication or impersonation of another's work. Such consequences may include not receiving a subject or unit result.

### Note:

- There is currently no agreed way to reference or cite AI generated information.
- The premise of referencing information is to direct readers to a particular source, which is challenging because generative AI tools do not always acknowledge the sources from which they generate responses. They may also make up sources.
- Sources 'cited' by AI tools may or may not be credible or reliable, and you must think critically to verify the information and check for missing, misleading and incorrect information.
- You should follow your school's academic integrity policies and procedures in relation to referencing all sources used in assessment and classwork.
- You should familiarise yourself with any legal obligations cited in the terms and conditions of use of each AI tool.
- You can find further information about ethical scholarship in the QCAA's Academic integrity course for students in your Student Portal (available via <https://myqce.qcaa.qld.edu.au>).

## Limitations of AI

Not all information freely available on the internet is accurate. Although the tone of responses from a generative AI system may be intelligent and authoritative, these responses are based on

an attempt to make data from a pre-trained database sound meaningful. That does not mean that the data is accurate, or that the interpretation of the data is logical, so you need to critically evaluate the responses. For example, information provided may be:

- incorrect. Generative AI tools often make mistakes and can make things up by piecing together information from various sources
- outdated. The knowledge is limited to when the AI was trained
- incomplete. If information is missing, the tool may not realise or inform the user
- biased. Stereotypes and biases can be exacerbated due to the data the AI is trained on. This is especially true when algorithms discover their own rules in the data they are given
- valueless. The language used can be awkward and/or repetitive
- unoriginal. AI cannot match the nuances of human behaviour and reasoning, which means the information it provides may lack originality.

## Protecting your personal data

Like the use of other online services, the use of generative AI carries privacy concerns. You must understand the terms and conditions that govern the use of each platform, as these will have implications for how your information may be used.

For instance, some platforms may seek to create profiles based on what prompts and data users provide, e.g., photographs and authentic work. Others may seek to retain or sell users' personal or sensitive information.

## Authenticating your work

For school-based assessment, teachers make judgments to determine students' achievements. It is essential that these judgments are based on accurate and authentic assessment information. Schools use a variety of strategies to authenticate student work, which may include:

- allocating classroom time on a task so the teacher is familiar with each student's work in progress and can regularly monitor and discuss aspects of the work with students
- requiring students to document specific stages of the development of work, such as topic choice, listing resources and conducting preliminary research in class
- collecting copies of each student's work at given checkpoints.

Teachers may also:

- require formal acknowledgment and declaration of information used and assistance provided. This clarifies and legitimises such support and teaches the principle of academic honesty
- require a brief annotation, summary or discussion, written in class, exploring further some aspect of the subject matter or of the process of text production. This should help to indicate the extent of each student's understanding and involvement in the task
- require an interview with the student or have some other spoken discussion or presentation following the submission of the task to explore further or clarify some aspects
- require submission with the task of the original planning and all drafts of the work, monitored progressively by the teacher.

## Useful terms

**Artificial intelligence (AI):** A general term used to refer to computer systems that appear to behave intelligently and perform human-like tasks.

**Chatbot:** A conversational interface that carries on a dialogue with a user by means of a predetermined script generated from high-probability responses.

**Chat-based generative pre-trained transformer (ChatGPT):** A natural language processing tool that can generate responses to questions from a predetermined large amount of material available on the internet.

**Deep learning (DL):** A part of the field of AI and an emerging area of machine learning (ML). It involves neural networks and complex computational calculations that help machines find patterns to assist in making automated decisions and produce results that mimic human behavioural patterns.

**Generative AI:** An AI that uses deep learning to synthesise products (e.g. responses, images, music) based on user prompts and an existing set of generative data.

**Large language model (LLM):** An equation that, based on a large amount of data, provides a response by guessing the most likely next word by mimicking the data it was trained to use.

**Machine learning (ML):** The ability of a machine or algorithm to identify rules and patterns in data without a human specifying those rules and patterns. These algorithms build their own model for decision-making and can perpetuate biases based on the data on which they are trained. ML is a subset of AI.

**Natural language processing (NLP):** Uses an understanding of the structure, grammar and meaning in words to help computers 'understand' and 'comprehend' language.

## More information

If you would like more information about academic integrity and assessment in the QCE system, please visit the [myQCE website](#).

For more information about academic integrity and schools, please refer to the *QCE and QCIA policy and procedures handbook v4.0* on the [QCAA website](#).

Alternatively, email [myqce@qcaa.qld.edu.au](mailto:myqce@qcaa.qld.edu.au).



© State of Queensland (QCAA) 2023

**Licence:** <https://creativecommons.org/licenses/by/4.0> | **Copyright notice:** [www.qcaa.qld.edu.au/copyright](http://www.qcaa.qld.edu.au/copyright) — lists the full terms and conditions, which specify certain exceptions to the licence. |

**Attribution** (include the link): © State of Queensland (QCAA) 2023 [www.qcaa.qld.edu.au/copyright](http://www.qcaa.qld.edu.au/copyright).