

Guideline: Generative Artificial Intelligence and Research

Scope

This is a resource for all persons engaged in research¹ at UniSA, including academic staff, adjuncts and students (research degree, post-graduate, honours and undergraduate).

Overview

Generative Artificial Intelligence (GenAI) is the branch of artificial intelligence systems that are capable of producing human-like responses to specified user input, usually in the form of text prompts. GenAI systems encode information present in its training data and generate probable responses based on specific user inputs.

GenAI brings both opportunity and risk when used in research. Improved efficiencies and productivity are clear advantages to using these models, for example in solving data-driven problems faster or perceived enhanced readability of research outputs. One key risk when using GenAI in research is the potential for breaches in research integrity including matters related to confidentiality, intellectual property and authorship.

The University expects that all researchers uphold the highest standards of research integrity by abiding to the principles of responsible research as outlined in the [Australian Code for the Responsible Conduct of Research](#) (Code) and the University's [Research Integrity Policy](#). When using GenAI in research it is the researcher's responsibility to ensure the principles in the Code and the University's policy are adhered to; non-compliance may result in a breach of research integrity.

PRINCIPLES OF RESPONSIBLE RESEARCH CONDUCT

HONESTY, RIGOUR AND ACCOUNTABILITY in the development, undertaking and reporting of research

TRANSPARENCY in declaring interests and reporting research methodology, data and findings

FAIRNESS in the treatment of others

RESPECT for research participants, the wider community, animals and the environment

RECOGNITION of the right of Aboriginal and Torres Strait Islander peoples to be engaged in research that affects or is of particular significance to them

PROMOTION of responsible research practices

CONSIDERATIONS WHEN GEN AI IS USED

- its role, influence and extent of application should be duly noted; researchers must accept responsibility and accountability, taking ownership for content generated through GenAI;
- recognise and acknowledge biases and confirm the reliability and accuracy of information generated through GenAI;
- acknowledge when GenAI models are used;
- appropriate recognition and referencing of information sourced from GenAI models;
- use caution when inputting data into GenAI models, especially confidential, commercial-in-confidence, copyrighted and human data, noting the potential risk of losing data ownership and that entering information into GenAI models may be considered a breach of confidentiality;
- recognition of data sovereignty specific to Aboriginal and Torres Strait Islander people;
- staff with supervisory responsibilities to students undertaking research must support a culture of responsible research conduct.

¹ As defined by the Australian Code for the Responsible Conduct of Research, the concept of research is broad and includes the creation of new knowledge and/or the use of existing knowledge in a new and creative way so as to generate new concepts, methodologies, inventions and understandings. This could include synthesis and analysis of previous research to the extent that it is new and creative.

Frequently Asked Questions

Can I use GenAI as a research tool?

The use of GenAI as a research tool is not prohibited at UniSA but is dependent on how and why you plan to use GenAI. It may be appropriate to use GenAI for the purpose of data collection and/or analysis. In some disciplines, GenAI may be readily used in research, so students should first discuss with their supervisor and/or their supervisory panel or other researchers with experience in GenAI to understand if GenAI is appropriate for their research. All researchers must ensure that the use of GenAI does not result in a breach of ethical or research integrity principles.

Can I use GenAI to help me write a literature review?

Researchers may use GenAI to find, summarise and compare articles noting that:

- GenAI lacks the ability to perceive, rationalise or critique information and may produce inaccurate or biased content, i.e. “AI hallucination”, also known as confabulation, can occur when an AI model generates false information but presents it as fact.
- It is the researcher’s responsibility to verify the accuracy of any content developed with the help of GenAI.

Can I use GenAI to help me write my thesis?

Prior to using GenAI, students must discuss this with their supervisor and/or their supervisory panel or other researchers with experience in GenAI to ensure adherence to the principles of responsible research. GenAI may be used to support the writing process but should not be used entirely for interpreting data or for drafting your thesis. Consider using editorial resources, refer to [Thesis Writing](#).

Doctoral students are reminded that the purpose of a doctoral degree is to develop new knowledge and that the thesis reflects this original contribution to knowledge which will be examined through the oral defence. Therefore, it is important that students are able to describe and defend how they used GenAI and the information produced.

Can I use GenAI to help me write grants or research papers?

This is dependent on the publisher or granting agency to which you are submitting a grant or paper. The [National Health and Medical Research Council](#) and [Australian Research Council](#) each have a policy on the use of GenAI for the purpose of crafting and reviewing grant proposals. As many publishers have a policy on GenAI you need to check with the publisher before submitting articles.

How do I reference GenAI?

All researchers must be transparent when reporting methodologies and tools used in the research process and this includes referencing when GenAI is used in data collection or analysis. Refer to the [Library referencing guide](#) and [UniSA’s Artificial Intelligence for Teaching and Learning in Higher Education guide](#) for referencing expectations; note that GenAI should never be listed as an author.

Students who use GenAI in their research must acknowledge this in their thesis or research paper. Students should discuss where this information should be referenced and what level of detail is required with their supervisor. In some cases, it may be relevant to include the prompts supplied to the GenAI model along with the responses received.

Frequently Asked Questions

Can I use GenAI to help me prepare for my Oral Defence?

Yes, GenAI can be used in preparing for the Oral Defence; for example in generating potential questions you might be asked in the Oral Defence, similar to preparing for a job interview. It is important to first discuss this with your supervisor.

Can I use GenAI to help me create presentations or translate my research?

GenAI can be used to translate your research for a different audience making it easier to understand. There are some more advanced GenAI models that can repurpose scientific manuscripts into presentations. When using GenAI for these purposes, never input confidential information.

Can I use GenAI to help me review grant proposals or review papers?

Inputting data into GenAI models may constitute a research integrity breach. Some GenAI models provide users options for how the data can be used once it has been uploaded, however there is always a risk that the information may be reused either intentionally or otherwise. Researchers are advised not to share data or information with GenAI models that they wouldn't normally make publicly available, i.e. confidential, commercial-in-confidence, copyrighted and human data.

Reviewers are required to maintain confidentiality when reviewing grant proposals and articles; always check with the granting agency and/or publisher on their GenAI policy. Using GenAI for the purpose of review is a breach of confidentiality as the information inputted into GenAI could be disseminated further without consent. The [National Health and Medical Research Council](#) and [Australian Research Council](#) both state that GenAI models cannot be used for reviewing grant proposals.

Other Resources

[UniSA Policy: Research Integrity Policy](#)

[UniSA Procedure: Research Degrees Student Research Misconduct](#)

[UniSA Library Guide: Artificial Intelligence for Teaching and Learning in Higher Education](#)

[Department of Industry, Science and Resources: Australia's AI Ethics Principles](#)

[National Health and Medical Research Council: Policy on Use of Generative Artificial Intelligence in Grant Applications and Peer Review](#)

[Australian Research Council: Policy on Use of Generative Artificial Intelligence in the ARC's grants programs](#)

[Tertiary Education Quality and Standards Agency: resource for using GenAI in research](#)

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