# FINDING INFORMATION

University Library

# Using Generative AI in coursework or research

#### "Don't do it"

There are those who will advise you not to use large language models such as ChatGPT in any coursework or dissertations. They are quite right in that you should *not* use AI to write your text for you. This is considered plagiarism and counts as academic misconduct which can draw penalties. See the <u>University Guidance on the use of AI here</u>.

Library staff will also point out that you must not use it to produce references. Generative AI is excellent at making up references which don't exist. Remember, it's not intelligent, it has simply read a lot of the internet and is good at predicting what words might go next to each other. This is why the references can look convincing but use made up journal titles or authors.

However, there may be applications which are entirely appropriate and such AI tools are likely to become part of life, study and work as they improve and become more widespread. This guide explores some applications for coursework or research and provides tips on writing useful prompts.

# **Planning and Outlines**

Generative AI can be useful at the planning stage of any work to suggest stages in the process which you need to prepare for or avenues of research which might be worth pursuing. However, note that it will only be offering suggestions based on the pages (or text) that it has already been trained on so it will not produce anything novel or creative. Also note, that ChatGPT, for example, has a cutoff date of Sept 2021 so it doesn't know about anything which has happened or been discovered after this date.

It is always worth spending time considering your own ideas on your topic and finding inspiration in reading widely, paying close attention in lectures, or networking with specialists (e.g. your lecturers offering tutorials or at conferences for which there may be bursaries for student attendance).

Al may be also be useful in scheduling your time spent on an assignment and how you can fit in the work necessary in an already busy schedule.

If you do use generative AI, be as specific as you can in your prompts to generate more useful responses. Follow up on bland (non-specific) suggestions by asking further questions.

#### Conversations

If you're struggling to understand a concept or if you're finding it hard to express yourself, use generative AI as a willing partner to discuss the issues and perhaps find a way forward. However, be very careful you're not simply paraphrasing its output as your own. Here you might find that just one prompt is insufficient, but you need to use several to get useful responses which are more specific. Also, consider using prompts to ask for multiple viewpoints.

You can ask the AI to imagine it is a teacher or college student or to limit its language complexity to get it to answer in more helpful ways. Giving the AI some context and giving it specific relevant details can be powerful in writing good prompts. (Beware of giving out any personal information, however).

#### **Summaries**

Be very careful about asking generative AI to summarize particular texts. Even if it knows (or claims to know) the work in question, its summary can be very limited, biased or miss key points. It is always worth checking for yourself the actual content that it is attempting to summarize.

# **Keywords**

Selecting good keywords to use in searches for material is a vital part of your research and can be challenging, particularly in a second or third language. There are various tools you can use to help with this such as the keywords (or descriptors) provided in Discovery, a technical thesaurus (e.g. in Business Source Complete, ERIC or Engineering Village), keywords you find attached to relevant

journal articles, or by taking inspiration from the suggested search terms that some search engines offer.

Generative AI can offer further assistance in suggesting vocabulary and related topics which may help you to either expand your searches or to refine them so that you can find just what you need to support the arguments you are making in an assignment or dissertation.

Don't forget to be careful in the language of your prompts in order to get the best results. If you use the word 'football', don't forget that many of these Als are built by US companies and may not give you the same results as 'soccer'. You should also check your spelling in case this affects your results.

You can ask Al to generate quite complex search strings which most databases will accept. Example: PROMPT: design a search string to search for Career experiences of women in STEM in the UK RESPONSE: ("women in STEM" OR "female engineers" OR "female scientists" OR "women in technology" OR "women in mathematics") AND ("career experiences" OR "workplace challenges" OR "gender bias" OR "glass ceiling") AND ("UK" OR "United Kingdom" OR "Britain" OR "England" OR "Scotland" OR "Wales" OR "Northern Ireland")

## **Language Translation**

Machine translation, such as Google Translate, has come a long way in the last few years. It can do a fairly good job with languages close to English (e.g. European languages) and can now manage at least an approximation of languages that are linguistically more distant (such as Asian languages). This means that it may now be possible to extract useful information from texts or journal articles that are written in a variety of languages. This can increase the diversity of your citations and arguments.

Generative AI can provide such translations, but care should still be taken with the results. Cite the original document and include in the main text or a footnote a note that machine translation was used. Check with your tutors that this type of citation is acceptable.

## **Going Further**

Generative AI may be able to help you find suitable publications should you wish to publish your work. (One example might be <u>Emerging Minds</u>). Your tutor may be able to help with this as well and our <u>Research Outputs Team</u> can also assist with selecting academic journal titles and avoiding predatory publishers. Use a prompt which outlines your work and ask for recommendations on suitable titles. You can be specific about whether you want something academic or for a more general audience and you can ask why it recommends a particular title. Given a specific journal example in the prompt, AI may also be able to help you format your work in the required style. See also <u>ResearchRabbit</u> for an AI which focuses on academic work specifically.

#### Referencing

If you do use AI, make sure that you reference it as you would with anything else that is not entirely your own work. The Library has produced support in <a href="mailto:Referencing@Portsmouth">Referencing@Portsmouth</a> to help with this.

You may also wish to consider other ethical issues around the use of such generative AI. In particular, be aware that the AI might be biased. Companies do not release information on what large language models the AI has been trained on. It is easy to see that if, for example, they are trained on only English language data sets, or a corpus of text from a predominant geopolitical bloc, or using rules created by a small, homogenous groups of employees, then biases in the responses offered may creep in.

You should also be aware of intellectual property concerns – particularly with image creation AI – as generative AI may have been trained on original work without being licensed for the purpose or giving due credit.

**Further Help** on finding good resources for your coursework or dissertations is available from library@port.ac.uk or the 24/7 Chat or in person in the Library. Alternatively, you can contact your Faculty Librarian for more specialized, in-depth help. Just ask! We'd also be really interested in hearing how you've used generative AI in your studies or research, so please drop us a line if you've a story to tell.