Background literature review

**Students’ voices on Generative AI**

Found that there is a generally positive attitude towards generative AI in teaching and learning. According to John Biggs’ 3P model student perceptions of their learning environment, abilities and teaching strategies, with positive perceptions leading to deep learning and negative perceptions leading to surface level learning. Students perceive generative AI technologies as beneficial for providing personalized learning support that is available 24/7. There is a positive correlation between students’ knowledge of generative AI technologies and frequency of use, which suggests that exposure to this technology may help in students’ acceptance of this technology which could further enhance learning. While students perceptions of AI are generally positive there is some concerns over the accuracy and transparency of the tools. Students were concerned about the validity of the outputs of the AI as well as some concerns that they cannot trust the output as some AI’s are like a black box where you provide a prompt and it spits out some text which may or may not be correct and you don’t know how it arrived at that solution

* Educational institutions should consider providing educational resources, perhaps workshops may be a sensible idea, to let students familiarize themselves with AI tools.
* The developers behind these AI tools could provide more transparency in how the tools arrive at their outputs e.g. Bing AI provides links to where it got its output from or simply providing an explanation of the AI’s decision making process.

**From Ban it till we understand it to resistance is futile**

Some good explanations of the capabilities and limitations of AI tools.

A snapshot in time of university programming instructors’ thoughts on generative AI like ChatGPT. in early 2023. Found that in the short-term instructors were concerned about cheating which led to immediate reactions such as banning AI tools and weighing exams more (where AI tools aren’t allowed). In terms of long-term plans instructors diverged into two groups, one group who wanted to resist the use of AI tools by creating AI-proof assignments, paper-based exams and focusing on teaching the fundamentals(analogy of math educators teaching the fundamentals of arithmetic and algebra after the invention of the calculator), and another group who wanted to embrace AI tools by integrating their use into classes:

A diagram of a diagram

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