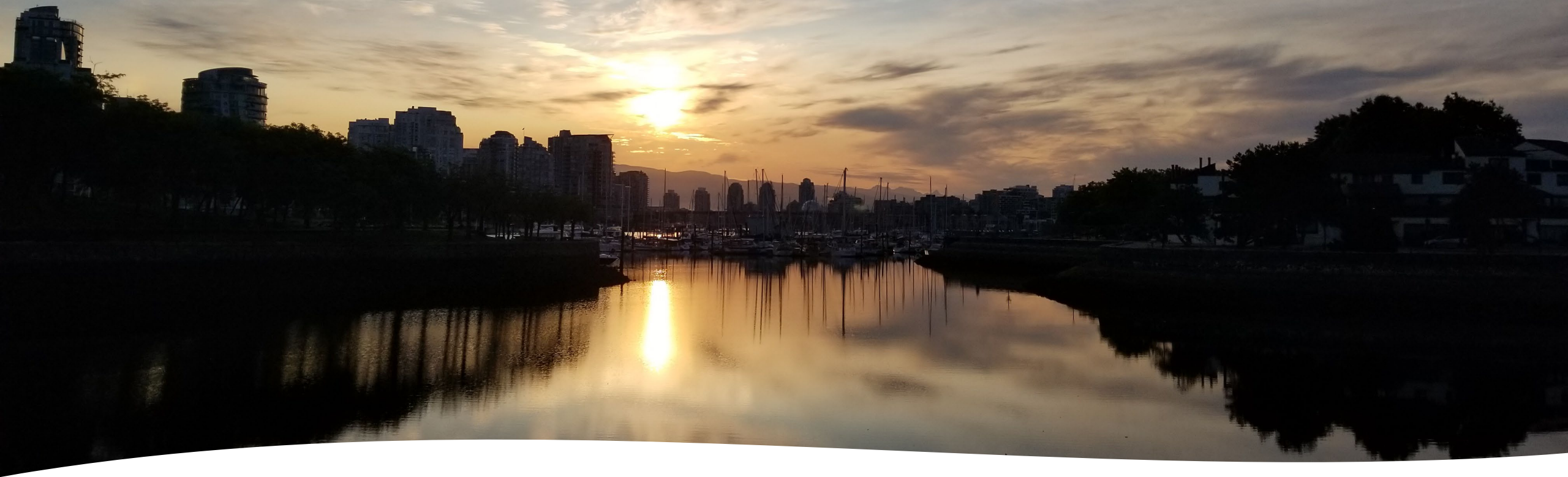




Using AI to Co-create Teaching Materials

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& Research



Land Acknowledgement

VCC's Centre for Teaching, Learning & Research acknowledges our location on the traditional unceded territories of the x^wməθk^wəyəm (Musqueam), S_kwxwú7mesh (Squamish), and səʌlilwətaʌ (Tsleil-Waututh) nations who have been stewards of this land since time immemorial.

Objectives for the session

- Identify ways AI can be used for teaching material design.
- List possible uses for AI in administrative tasks.
- Explain prompting models.
- Describe cautions in using AI.
- Consider framework for approaching AI in the classroom.

[Specific point in time... will continue to evolve]



Current Context

- Globally, GenAI tools have started to be used for general administration purposes, for marketing, in admissions, or to design courses. GenAI tools are also being used to better connect students with support services, or to improve career services.
- CBC article Sep 2023 [Learn AI now or risk losing your job](#) (how can we prepare students for future industry/careers?)
- VCC students cannot be required to use ChatGPT as PIA has not been completed. Choice for faculty and student is important.
- Today's session will look at use of generative AI language tools
 - Bing uses GPT 4.0, free, connected to internet. Microsoft does not retain prompts or responses from users in Bing Chat. [After the browser is closed, the chat topic is reset, or the session times out, Microsoft discards all prompts and responses¹](#).
 - [GPT 3.5](#) is free/not connected to internet. GPT 4.0 requires \$. Chat history saved and used for training unless you change the data controls under Settings, or regularly delete conversations.

How have you used ChatGPT (or other AI) to support your teaching practice?



Task category	Today	With a better future AI
Just Me Tasks	These are tasks that are uniquely you. Either the AI is not capable of doing them, it is too hard to get the AI to do a good job, or you are unwilling to give them up	These are tasks you never want to give up.
Delegated Tasks	These are tasks that you will get AI help with, with tight oversight, including checking for errors and giving feedback	Given where AI is going, what other tasks will you be able to delegate?
Centaur Tasks	These are tasks where you learn to work seamlessly with the AI, integrating into your workflow, passing work back and forth.	Consider where you wish the AI could be more helpful. Can you figure out workflows that might incorporate AI more?
Automated Tasks	There are relatively few of these, so far, because AI is prone to errors. But it is a rapidly growing space.	This is likely to be a significant growth category

Co-developing teaching materials with AI

- **Develop short answer questions (or MC questions).**
Develop 100 short answer questions for a 100 level exam in [course] based on the following learning objectives [insert objectives]
- **Create case studies.**
Act as a social psychology 100 professor in British Columbia. Develop 10 concise case studies that exemplify various sociological concepts. Include thoughtful discussion questions to encourage critical thinking and practical application.
- **Create problem sets.** (be cautious about publishing these -could use as practice problems in a course, or quiz questions).

Co-developing more teaching materials

- **Generate examples.**
Select a concept for deep understanding. Tell AI to research the concept for authoritative sources. Request the AI for many varied examples of the concept. Specify your preferred writing styles and intended audience.
- **Develop Course Design/Lesson Design Ideas.** Tell AI to act as a course designer/faculty member and develop a backward design map using Finks approach for x course being taught at a [geography][institution type]. Make sure the learning objectives are measurable and align with blooms taxonomy and the assessments are authentic and learner centered.

[Using AI to make teaching easier & more impactful \(oneusefulthing.org\)](https://oneusefulthing.org)

Even more ideas for AI use

- **Create rubrics.** You are a grade 12 chemistry teaching in british columbia. Create a marking rubric using a scale from 0 to 3 points (using 4 categories) for written lab reports that uses the following criteria: lab report format, data, analysis, references. Include a description of performance in each category.
- **Identify instructional activities** based on time, **assessment** activities based on learning outcomes.
- **Create glossaries** of terms.
- **Create lesson hooks.** *Act as an instructional designer. I need some examples of hooks for a lesson on acid-base reactions for first year university chemistry.*
- **Write a script** for a podcast or video.
- **Create images** (midjourney, dall-e, firefly, etc)
- **Create Powerpoint** from a prompt or convert text (Gamma.AI). Free to a point.

Trust, Torrey (2023), [ChatGPT Resources](#), retrieved from CC BY NC 4.0

Using AI for administrative tasks

- **Draft routine emails.**
- **Revise writing.**
- **Summarize student responses for themes.**

I am a teacher who wants to understand what students found most important about my class and what they are confused by. Review these responses and identify common themes and patterns in student responses. Summarize responses and list the 3 key points students found most important about the class and 3 areas of confusion: [Insert material here]

- **Create an FAQ document for students.**
- **Create a list of frequently used comments** to input into Moodle marking guide.

Create a list of common critical feedback statements that would help students identify how to improve their writing skills in a business course.

Process

- Consider which type of prompting strategy you want to use, or iterative use to improve the response. With new tools, prompting will become less important.
 - Flipped Interaction Pattern
 - Reflect on Reflection (RoR)
 - Chain of Thought Prompting (CoT)
 - A Prompt Game
 - Cognitive Verifier Pattern
 - Few Shot
 - Single Shot
 - Subdivide Questions
 - QEC Model
 - Audience Persona Pattern

Cautions

- Consider using anonymous or pseudonymous email/name for AI accounts.
- Do not share any organization sensitive information, personal data, or medical data. “Chat GPT logs every conversation, including any personal data you share, and will use it as training data.”
 - For example, to draft an email, use [Name], [Position], [Institution/Org] [phone number]
- Be cautious about entering research data for analysis (ethical/legal concern?).



Cautions part 2

- Do not enter student work for assessment (IP, ethical concern).
- [Risks](#) associated with AI Text Generators (can produce misleading, false, offensive or biased content, makes up references)
- Ethics of AI
 - [burden on low-paid employees in global south who have been labelling the data used to train AIs have been subjected to sensitive content](#)
 - [profiting off open data/stealing copyright data](#)
 - [ecological impact](#)

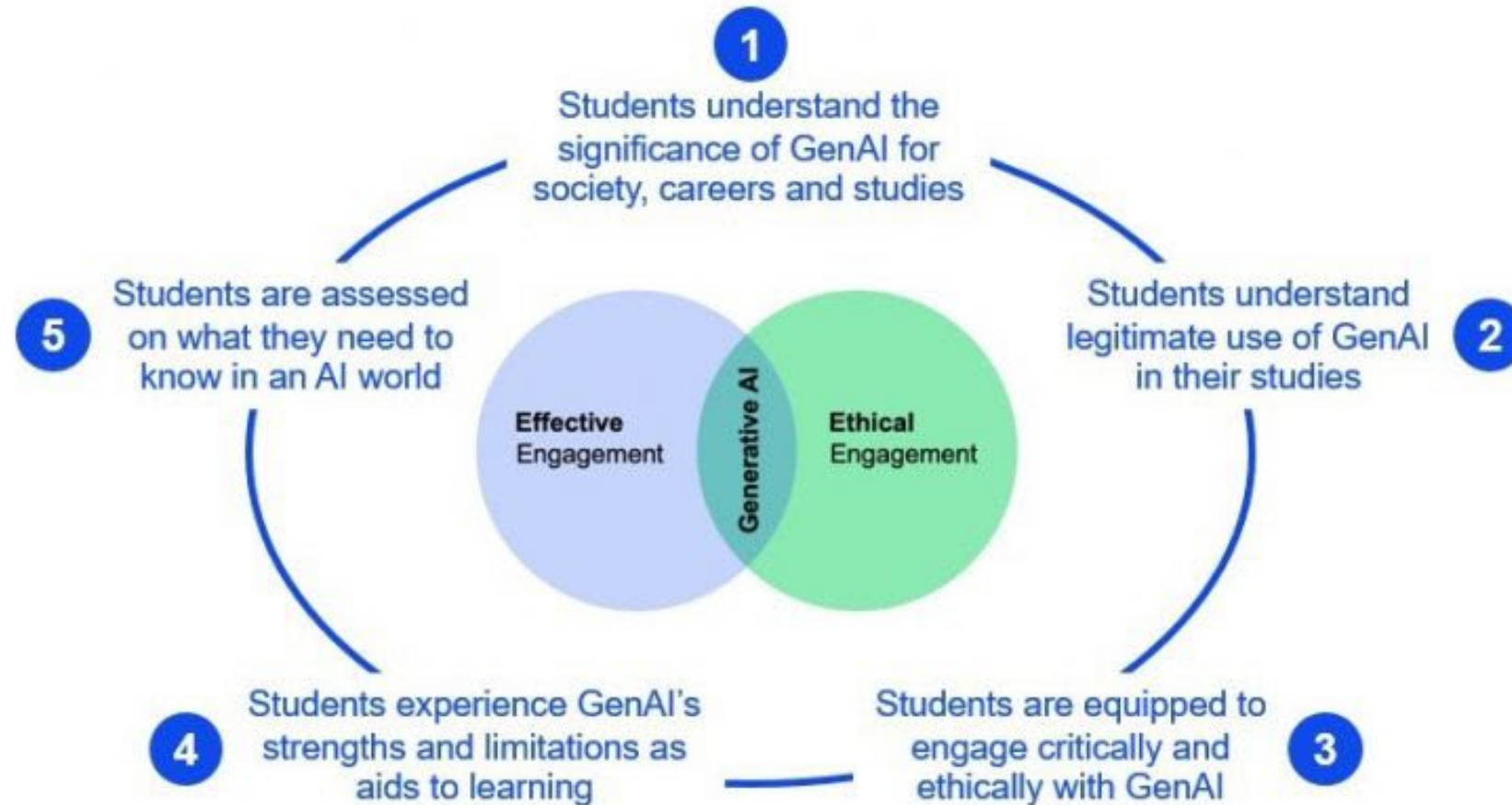
<https://www.aljazeera.com/economy/2023/7/19/thousands-of-writers-demand-ai-stop-using-work-without-permission>



How have you adapted your teaching practice in response to AI?



University of Technology, Sydney student-centred principles to guide usage of GenAI.



Approaching AI Holistically: Getting Started

- Orientation – syllabus or co-created guidelines on AI permissibility. Eg create a sliding scale for when it's okay to use AI. ([AI assessment scale from no AI to full AI](#))
- Discussion on ethics and academic integrity. How do students see use of AI with respect to academic integrity? How will group work/collaborative work be handled?
- Conversation on risks and benefits of using AI (digital literacy education) – What are student perceptions of benefits? risks? [See KPU's overview.](#)

Approaching AI: Throughout Course

- Redesign assessments – does process or product or both matter to measuring students learning outcomes?
- Test your own assessments to see what AI generates.
- Model ethical attribution of AI created learning materials (or prompts /process)
- Reflect on your personal view of AI and how assessments are working.

*Reminder: AI detectors such as GPT zero have been shown to be [unreliable in accuracy](#). They are not recommended and VCC does not officially endorse them.

Redesign assessments

- [Specify](#) permissible use of AI and how to attribute.
- Choose non-text based outputs – diagrams, podcasts, videos, screencasts, mindmaps, presentations, etc.
- Do work in class – writing, discussion, panels, debates, problem solving.
- Break large assignments into smaller stages with peer review in class.
- [Create authentic assessments](#).
- Have assignments incorporate reflection on in class discussion/activities.
- Have students generate in-class summaries of topics/concepts and then compare with AI and identify gaps.
- Plan for students to use AI – then critique work for biases, gaps, hallucinated resources, etc.
- Ask for personal connections with the content.

**Indiana University Bloomington, Aug. 2023

D'Agostino, Susan, *ChatGPT Advice Academics Can Use Now*,

Checklist for using AI (can adapt this to share with students)

Checklist for using GenAI tools

Work through this checklist for tips on how to use GenAI ethically and responsibly.

Click 'submit' to get advice on any of the unchecked boxes.

- Has your subject coordinator approved the use of GenAI tools?
- Can you verify that the content GenAI has created is factual and current?
- Do you have a clear understanding of the themes/ideas/topics in the content you have generated?
- Have you considered what biases may be present in the content?
- Have you checked that the references are genuine?
- Have I correctly acknowledged any GenAI content included in my assessment?

 Submit

Closing

- AI will continue to evolve – being in a liminal space is okay - how will you evolve with it?
- Supports are here: reach out iasupport@vcc.ca
- Perplexity.AI is an alternate generative AI language tool that does not require any kind of login and provides sources
- Goblin.AI is a tool that can help students (and you) break down tasks into smaller, manageable pieces

Resources

- [UBC Prompt Models](#) - CTLT
- [Enhancing student learning and genAI](#) (video, 50 min) – UBC CTLT
- [Integrating Generative AI in Assessment design recording](#) (video, 1hr 45 min) – UBC CTLT
- D'Agostino, Susan, ChatGPT Advice Academics Can Use Now, Inside Higher Ed. 2023, <https://www.insidehighered.com/news/2023/01/12/academic-experts-offer-advice-chatgpt#>
- [Using AI to make teaching easier](#)
- Torrey (2023), [ChatGPT Resources](#), retrieved from CC BY NC 4.0
- [How AI can be used meaningfully by teachers and students in 2023 – Teaching@Sydney](#)
- [How to productively Address AI-Generated Text in Your Classroom](#), Indiana University Bloomington
- [Assessment Ideas for an AI Enabled World](#)
- [VCCs Institutional response to ChatGPT](#)
- [Syllabi policies for AI generative tools](#) (global educ institutions)