

# Generative Artificial Intelligence and Assessment

## A summative working group report

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**University  
of Victoria**

Learning and  
Teaching Support  
and Innovation

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## Background and Purpose

The use of Generative Artificial Intelligence (GenAI) in higher education has become a topic of discussion in the post-secondary education sector. GenAI is a form of machine learning with the capabilities to produce text, images, video, music, code, etc. Using machine learning algorithms, GenAI can generate content based on prompts requested by a human user. These conversations have focused on concerns relating to impacts on teaching and assessment practices, academic integrity issues, and the learning environment more broadly. Although there are potential opportunities with the use of GenAI in the higher education context, there are also ethical concerns regarding the use of these tools that must be addressed.

In February 2023, under the direction of Dr. Elizabeth Adjin-Tettey, Associate Vice-President, Academic Programs, the LTSI formed the Artificial Intelligence and Assessment Redesign Working Group (AI working group) with the purpose to “carefully review and evaluate the strengths and limitations of GenAI tools like ChatGPT.” Detailed goals of the working group are included in the terms of reference, [see Appendix A](#). The working group membership consisted of widespread representation including faculty members, a Librarian, and the division of Learning and Teaching Support and Innovation (LTSI) staff. The AI working group reports to Dr. Elizabeth Adjin-Tettey, Associate Vice-President Academic Programs.

## Methods

The AI working group met 9 times between February and June, 2023. Over the summer months, group members contributed by offering suggestions and edits to deliverables, a literature review<sup>1</sup>, environmental scan<sup>2</sup>, and to plan and execute a campus consultation process. Details are as follows:

1. **Literature review:** critically analyzed a total of 150 publications from 34 peer-reviewed journals and some non-academic readings for the purpose of illustrating current use including blog posts, short articles and commentaries, published between 2013 and 2023, focused on higher education and included relevant data on GenAI tools and their use in learning and teaching in higher education with a focus on content generator tools and language model.
2. **Environmental scan:** examining websites from 24 research intensive universities and a review of the policies and guidelines housed in the [Observatory on AI Policies in Canadian Post-Secondary Education](#) created by Higher Education Strategy Associates.
3. **Consultation process:** including developing a set of guiding questions to be used to prompt discussion and customized for each participant group. A total of 13 consultations were then held in person and virtually with students, faculty/librarians, and campus stakeholders taking place between March and June, 2023. Results from the consultations were then analysed and grouped into themes by the AI working group. For a thorough overview of consultation process, questions asked and stakeholder groups consulted, [see Appendix B: schedule](#) and [Appendix C: questions](#).

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<sup>1</sup> Dias, S., & Bedi, S. (2023). AI and Higher Education: Generative Tools in Teaching and Learning - Understandings, Current Uses and an Agenda for Debate. University of Victoria, Learning and Teaching Support and Innovation.

<sup>2</sup> Dias, S., & Bedi, S. (2023). *Generative Artificial Intelligence: Teaching and Learning in Canadian Universities*. University of Victoria, Learning and Teaching Support and Innovation.

## Results

### Literature review

Although the literature on the implications of GenAI in higher education is evolving, the literature review highlighted themes for consideration. Overall, the literature added theoretical and conceptual context to the effects of GenAI in higher education. While there has been a lot more attention and even panic regarding GenAI, especially with the rise of ChatGPT, other forms of GenAI and automation have impacted learning and teaching. Examples include Grammarly, spell and grammar checkers in MS Word, and even aggregated search engines like Google.

The literature discussed both the potential benefits and concerns of using GenAI in higher education. The potential benefits include opportunities for personalized learning and direct educational support to students. As a tool for personalized learning, it was shown that GenAI supported more timely and immediate feedback to students. Furthermore, it was helpful in the research process for students since GenAI tools like ChatGPT used Internet resources across multiple platforms. Another benefit was that it supported language barriers for students, including English as an additional language learners. Furthermore, GenAI tools, especially ones like ChatGPT were shown to be adopted more widely in various industries. By using these tools, students were shown to build more robust digital literacy skills that they could utilize in the workforce.

The literature also addressed concerns and potential issues with the use of GenAI in higher education, including reinforcing inequities between students around access to certain tools (free vs. paid versions), increasing plagiarism, and the potential to “replace” educators. Although there were legitimate concerns regarding appropriate use of GenAI for student assessments, the literature suggested that being suspicious of students’ ethics on the use of GenAI by completely banning such tools would be challenging to enforce and would add to inequities. Instead, the literature suggested that instructors should clarify expectations, discuss with students the role of GenAI in the course if there is any, and be curious about some of the potential uses of GenAI to enhance teaching, assessment and feedback.

While examining the scholarly literature, potential insights emerged on how to address GenAI in higher education such as providing:

- 1) Training opportunities for instructors, faculty, and academic community on GenAI language model tools and content generator tools;
- 2) Open discussions and guidelines on using GenAI in the classroom as a learning tool;
- 3) Training opportunities for students on Gencoding, AI language models and content generator, including appropriate use to support learning and limitations of GenAI tools;
- 4) Policies and guidelines for academic integrity to ensure relevancy and clarity on GenAI for use in learning and teaching;
- 5) Encouragement to redesign assessments to promote originality, critical thinking and creativity.

### Environmental Scan

The environmental scan aimed to identify developments on the topic of GenAI by Canadian research universities, including resources, new policies and changes to existing policies, particularly on academic integrity. The working group scanned information from 24 Canadian universities which were publicly available from the university sites as well as the [Higher Education Strategy Associates Artificial Intelligence Observatory](#). Questions examined through this review include: “*What actions are other universities in Canada taking to address the surge of generative artificial intelligence tools such as ChatGPT?*”, and “*How is*

*academic integrity addressed at the institutional level in the time of generative artificial intelligence (AI?)”*. The environmental scan found similarities and differences within Canadian higher education research institutions and debates practices regarding to GenAI tools (Dias & Bedi, 2023).

Of all the Canadian universities that updated their academic integrity guidelines in this repository, most of them had similar statements on the use of AI. They stated that unless explicitly permitted by an instructor, the use of GenAI on assessments is academic misconduct. Instructors were not required to allow the use of GenAI, but all were permitted to, and a few encouraged the use of GenAI, such as instructors at Seneca. Instructors who incorporate GenAI into their teaching are encouraged to discuss the benefits and risks of GenAI with their students.

Most universities mentioned dangers such as inherent bias, ownership issues, false information, and data collection. Some universities, such as Kwantlen Polytechnic, suggested instructors mediate GenAI usage with their students. Additionally, all universities in the repository stipulate that instructors cannot require students to set up GenAI accounts. As another measure to manage risk of data collection, all universities in the repository suggested that instructors do not use GenAI detection software on student work. Instead, to limit the student use of AI, some universities, such as McMaster University and Wilfred Laurier, suggest that instructors rethink how they assess students altogether.

While the sentiments of most Canadian universities in the repository were similar, there were a few outliers and conflicting policies. For example, at McMaster University, instructors may use GenAI to give feedback on student work. However, the University of Toronto explicitly states that instructors may not use GenAI to grade student work. Although the decision to use GenAI ultimately fell on individual instructors, they were clear in their statement that learning about GenAI is an important opportunity to the current generation of students.

Some universities were more inclined to incorporate AI into their teaching. Wilfred Laurier, for example, is willing to set up workshops to teach instructors about the use of AI, and Kwantlen Polytechnic supplied an extensive list of recommended uses of AI in the classroom in their guidelines.

## Consultations

Findings from the consultations concluded the following themes ([listed in detail in Appendix D](#)):

1. **Policy and guidelines** including a formal statement and policies regarding AI, standards and limitations for its use in class and during assignments (including proper citation), and differentiation between what is a policy and what is a guideline, as well as who is responsible.
2. **Potential misuses of AI** including its impact on academic integrity, ethical and legal implications, GenAI bias on systemic issues, and perception of additional workloads.
3. **Training and literacy** including general training and customized training for various audiences (faculty/instructors and students) on how to interpret AI outputs, learning and teaching resources related to ethical usage of GenAI in course design and training, building of assignments and initiating open conversation about tools between instructors and students.
4. **Implications on pedagogy and opportunities for students** including addressing grade inflation, impacts on critical thinking, supporting learning differences and usage for international students who want to develop more academic English skills and usage for careers in GenAI.
5. **Data security and privacy** including how information is stored and shared using GenAI, who has access, as well as equity concerns around paid subscriptions of tools.

The consultation process did its best to consider the breadth and depth of AI related issues in higher education. It was noted that there has been significant development in GenAI in the past several months, and the landscape is constantly evolving.

## Recommendations

Upon completing the literature review, environmental scan and consultations, the AI working group has provided the following recommendations:

### UVic - Guidelines and policies

1. Develop guidelines for use of artificial intelligence tools in learning and teaching
2. Encourage the creation of discipline specific guidelines, including standards and limitations for the use of GenAI in teaching, assessments, thesis and dissertations.
3. Ensure that the academic integrity policy is up to date and includes reference to the use of GenAI.
4. Continue to develop and revise guidelines and policies related to GenAI to ensure compliance with copyright legislation.

### LTSI - Training opportunities and resources

1. Provide information on Teach Anywhere and UVic website in the form of articles written by instructors, students, and staff, as well links to other external sources that contribute to GenAI knowledge and applications for teaching and learning.
2. Provide contact information and frequently asked question information to instructors for specific questions regarding GenAI in relation to teaching and learning, policies and privacy considerations.
3. Create training opportunities<sup>3</sup> which include workshops, webinars, lectures, infographics, and group discussions. Potential workshops could include: GenAI literacy training for students and faculty, course (re)design and assessment (re)design.
4. Provide syllabus statements that instructors can use or adapt for permitting or preventing the use of GenAI tools in their courses to provide transparent direction to students. [For draft sample statements, see Appendix E.](#)
5. Provide funding initiatives such as teaching grants to support experimentation, usage and issues related to GenAI in teaching and learning.
6. Create faculty or teaching awards to recognize instructors who are (re)designing their course to address ethical use of GenAI, highlighting best practices that faculty can learn from.

## Conclusion and next steps

This report has provided a comprehensive overview of the implications of GenAI in higher education, with findings that highlight the potential benefits and concerns associated with the integration of GenAI tools and technologies into learning and teaching in the post-secondary context. This includes possible learning opportunities, facilitating research processes, and enhancing digital literacy skills among students. However,

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<sup>3</sup> Workshops to be hosted by Learning and Teaching Support and Innovation (LTSI) in collaboration with the Libraries and faculties on discipline specific needs.

it also raised legitimate concerns, including issues of access, academic integrity, and perceived threats to education.

There is a spectrum of policies and practices among Canadian research universities regarding GenAI use, with most institutions addressing concerns relating to academic integrity and ethical use. The consultations further enriched the AI working groups' understanding by highlighting themes related to policy development, misuse of AI, the need for training and literacy initiatives, implications for pedagogy, and data security and privacy concerns. These discussions underscored the evolving nature of GenAI and the pressing need for proactive strategies.

In light of these findings, it is evident that a balanced approach to GenAI in higher education is essential. We must harness the benefits while mitigating the challenges.

The next steps are for LTSI to create a strategic implementation plan that outlines timelines, responsible parties and collaboration with stakeholders, and resource allocation for each of the above recommendations. This plan should prioritize clear communication and collaboration among all stakeholders, ensuring that guidelines, training initiatives, and resources are developed and disseminated effectively. Additionally, continuous monitoring and adaptation mechanisms should be established to keep pace with the rapidly evolving landscape of GenAI in higher education. By systematically executing this plan, the LTSI along with relevant stakeholders can guide and support the university toward a responsible and effective integration of GenAI tools and technologies in learning and teaching.

## Appendix A: Working Group Terms of Reference

### Context

Over the past few years, there has been an increase in artificial intelligence (AI) tools and predatory practices targeting students, openly selling papers and answer keys to students. Vendors of AI tools now make up a multi-billion dollar industry. Although, in some instances, the use of these AI resources is in direct violation of UVic's Academic Integrity Policy, we also recognize that generative AI tools are only going to get better and more tools like it will be emerging. Furthermore, students may be in future positions such as in an employment setting where they will be using generative AI tools.

Given this context, we need to investigate when it might be appropriate to prohibit the use of these tools, the value of knowledgeably incorporating such tools into learning and teaching as well as educating students on how to best use these tools in ethical and responsible ways. Through supported educational approaches, student can gain and further develop critical thinking and analysis skills when using AI tools.

Furthermore, we believe taking an educational stance will promote better learning and appropriate use of AI tools as learning opportunities will ensure that we do not fall into the defensive or offensive binary when it comes to either banning and barring such tools or implementing AI detection tools. However we must also note that faculty cannot require students use AI tools as they are open source and require students to create an account with personal information.

### Purpose

The purpose of this working group (Made up of LTSI staff with the support of faculty members), is to carefully review and evaluate the strengths and limitations of AI tools. The working group must consider ways to support faculty/instructors in the (re)design of their assessments to ensure that they showcase student original work and that AI tools are not able to produce the final product or student deliverable or where appropriate, that students use AI tools responsibly and ethically.

### Guiding Principles

- Educate faculty/instructors about the possibilities and limitations of AI tools in learning and teaching (recognizing these tools are rapidly evolving) as well as provide context around privacy related issues regarding student access of AI tools
- Support faculty/instructors in how they might integrate AI tools into their teaching (where possible)
- Promote the principles of universal design for learning among faculty/instructors as a way to address some of the concerns with AI tools and student assessments
- Provide options to faculty/instructors on (re)design approaches for student assessment

### Goals

The goals of this working group include:

- develop a deep understanding of AI tools through experimentation and tests to discover their strengths and limitations;
- review existing and emerging literature on AI tools and their impacts;
- conduct an extensive consultation process with faculty, students and staff on issues related to AI tools in higher education;
- conduct an environmental scan to learn of approaches used by other higher education institutions regarding the use of AI tools for assignments and other assessment deliverables;





- create evidence-based learning resources for faculty/instructors to support assessment design/redesign that address AI software strengths and limitations;
- develop guidelines for the use of AI tools in teaching, assessments (where appropriate), and ethical use of these tools;
- work with disciplinary experts to determine how to best design and assess discipline specific assignments given the potential of existing AI tools;
- provide students with a background on how these tools work and how best to engage with them in an ethical way.

### **Timeline**

This working group will commence in February and will meet in person with a hybrid option every two weeks. The goals will be completed by June 2023, in order to help support training and development of faculty/instructors over the summer months in preparation for the Fall 2023 Term.

### **Proposed Membership**

- Shailoo Bedi (Chair)
- Sharon Dias, Graduate Research Assistant
- Erin Kelly, Director, ATWP
- Erin McGuire, Associate Teaching Professor, ANTH
- Ammie Kalan, ANTH
- Hayley Hewson, Manager, Learning Experience Design
- Jens Webber, CSE
- Nan Ami, Manager, Centre for Academic Communication
- Karen Munro, Libraries
- Hajime Kataoka, UNEX
- Hannah Rose, Communications Coordinator and Strategic Initiatives, LTSI

Also, where appropriate and identified by the working group, additional sub-groups will be created to help guide the work and to provide additional perspectives. For example, a sub-group to engage with the Libraries on how AI tools impact library research for students, as well as sub-groups that may be specific to disciplinary learning and teaching needs will also be considered.

The chair is responsible for setting the meeting schedule, assigning action items to the working group members, liaising with Dr. Elizabeth Adjin-Tettey, A/AVP Academic Planning, to seek guidance or have questions addressed. All working group members are responsible for the action items assigned by the chair and attend meetings scheduled by the chair.

## Appendix B: Consultation Schedule

### Faculty

100-Level Instructors Working Group	March 31st	2:30-3:30	Virtual
TAC's	April 24th	3:00-3:30	In-Person
Librarians	April 25th	1:00-2:00	Virtual
Faculty (Timeslot 1)	May 5th	1:00-2:00	Virtual
Faculty (Timeslot 2)	May 9th	11:00-12:00	Virtual
Faculty (Timeslot 3)	May 10th	2:00-3:00	Virtual
Faculty (Timeslot 4)	May 11th	1:00-2:00	Virtual

### Students

Students Zoom Timeslot 1	April 11th	3:00-4:00	Virtual
Students Zoom Timeslot 2	April 19th	1:30-2:30	Virtual
Students Zoom Timeslot 3	May 31st	1:00 - 2:00	Virtual

### Campus Stakeholders

Continuing Studies	March 27th	1:00-2:00	In-Person
Centre for Accessible Learning	June 5th	1:00-2:00	Virtual
Centre for Academic Communication	May 30th	2:30 - 3:30	Virtual

## Appendix C: Consultation Questions

### Librarians

1. When it comes to AI tools (including but not limited to ChatGPT, Grammarly, Dall-E, Quillbot):
  - a. What do you know?
  - b. What do you want to know more about?
  - c. What are you worried about?
  - d. What worries you about AI and academic integrity? (if not already addressed?)
2. What is the role of AI in the discipline(s) you support?
  - a. What are the current discussions in that discipline about research involving AI tools?
  - b. What about teaching with AI tools?
  - c. How do you think university education might address these discussions and emerging practices?
3. Are you already addressing or using AI in your librarian work, for instance in teaching or reference?
  - a. If yes, in what ways?
  - b. What do you like or dislike about it?
4. What strategies have you employed in either teaching students to use AI or to have them not engage with AI?
5. What kinds of institutional supports or changes might help with dealing with AI (e.g. class size, marking loads, etc.)?
6. What PD opportunities would you like to see around AI, either for yourself or for faculty or students?
  - a. Have you already done or are you doing any professional development around the topic?
  - b. How would you like to access these PD opportunities?
7. What kind of questions are you getting from faculty or students that you work with?
  - a. What kind of support as you being asked to offer?
  - b. Can you provide examples?

### Faculty

1. What do you know about Artificial Intelligence (AI) tools (such as: ChatGPT, Grammarly, Dall-E, Quillbot etc.)?
2. What questions or concerns do you have about AI tools?
3. Are there roles that AI tools may play in your discipline or area and have they been discussed within your faculty/departments?
4. How do you think students are using or benefitting from these tools?
5. Do you use AI in your teaching and/or assessments?
6. What strategies have you employed with your students around these tools?
7. What can UVic do to support you in regards to these tools (ie. Supports)?

### Campus Stakeholders

1. What do you know about Artificial Intelligence (AI) tools (such as: ChatGPT, Grammarly, Dall-E, Quillbot etc.)?
2. How do you think students are using or benefitting from these tools?
3. What concerns you most regarding AI tools and your area?



4. What recommendations do you have regarding how to deal with AI tools and academic integrity and ethical use of these tools?
5. What can UVic do to support you in regards to these tools (ie. Supports)
6. Any other topics you would like to raise at this point about AI tools?

**Students**

1. What do you know about Artificial Intelligence (AI) tools (such as: ChatGPT, Grammarly, Dall-E, Quillbot etc.)?
2. What questions or concerns do you have about AI tools?
3. Are there roles that AI tools can play in your field or studies, or outside of school that interest you?
4. Have your instructors demonstrated how to use these tools in class? If so, what did you learn?
5. What can UVic do to support you in regards to these tools?



12. The role of instructors in making decisions concerning the use or not of GenAI.
13. The roles and responsibilities of faculty in plagiarism detection related to GenAI.
14. Ethical and legal implications of AI.
15. Dealing with potential misuses of AI.
16. GenAI bias on systemic issues.
17. Support for instructors.
18. Keeping up with all and new AI tools.
19. Assessment design (e.g. adapting assessments to allow GenAI use/ Redesigning assessments to prevent the use of AI).
20. Addressing grade inflation in an era of AI.
21. Citing GenAI tools.
22. Standards and limitations for requiring the use of AI in class and for course assignments (especially given AI tools are open source and are not sanctioned as a learning tool by UVic).
23. Impact on critical thinking.
24. Clarification needed on what is a policy and what is a UVic guideline.
25. Perception of additional workloads related to dealing with potential or actual academic integrity violations.
26. Acceptable uses of AI and how to encourage them.
27. LTSI resources needed to support UVic community related to GenAI (course redesign, training, etc.)
28. Need to have more spaces for dialogues new pedagogical approaches and forms of assessments.
29. Understanding the role of AI in supporting students with learning differences.
30. Information on using GenAI ethically for instructors and students.
31. Clarification on who and which sector can/will develop the UVic policies and guidelines on AI use.
32. How to detect work done with GenAI.
33. How to use GenAI for marking.
34. Need for guidance on a statement that can be put into syllabi.
35. Need for student centred approach and teaching students how to interpret AI outputs.
36. AI tool for international students who wants to develop more academic English skills.
37. Using AI to build assignments.
38. Concern that CAC or other offices may be become responsible for navigating AI with students.
39. Data security/privacy
40. Impact on student literacy (Positive? Negative?)
41. How to initiate open conversation about AI tools between instructors & students

## Appendix E: Syllabus statements regarding GenAI

Depending on the course and/or discipline some instructors may want to allow, or even encourage the use of GenAI by their students, while others may want to limit or prohibit their use. Instructors who allow the use of artificial intelligence tools in their courses must provide clear instructions to students about their expectations regarding use of GenAI in their courses in course outlines. Instructors are encouraged to discuss the benefits, risks, and limitations of such tools and to teach students about ethical and responsible use of GenAI. Below are draft statements intended to help instructors shape their statements on appropriate use of GenAI or reinforce a shared understanding of what is permitted and what is not for a course. These statements can be used for undergraduate or graduate level courses.

### Situation 1: Instructor does not allow the use of GenAI in any stage of the course completion.

*Please be advised that in this course you are **not authorized** to use any form of generative AI. In order to successfully complete course activities, generative AI is not required nor welcomed. Students should not make any use of generative AI tools such as ChatGPT, Grammarly, among others, that use AI for content generation and editing. As the University of Victoria states in its Academic Integrity Policy “Academic integrity requires commitment to the values of honesty, trust, fairness, respect, and responsibility.”. Therefore, I expect you to comply with the course syllabus and I encourage you to enhance your academic experience in this course by refraining from using generative AI.*

### Situation 2: Instructor partially allows the use of GenAI during course completion for (e.g., assignments, brainstorming ideas, generating topics, images, among others)

*In this course, students may use GenAI such as ChatGPT [insert other tools as appropriate] in limited ways. Below are the specific assignments and activities that students are permitted to use generative AI. In order to not violate academic integrity, you must cite any generative AI tools properly using one of the following styles: APA style, Chicago [insert any other style accepted by instructor]. Additionally, you must add all the prompts and questions used within the generative AI to create content as an appendix. For all the other activities in this course, please refrain from using any generative AI. Please not that you can successfully complete all the courses requirements without the use of generative AI.*

*[list assignments and/or activities that students are permitted to use GenAI if they wish]*

### Situation 3: For instructors who wish to work with GenAI

*In this course I welcome the use of generative AI for assignments completion and during activities in the classroom. Therefore, you are authorized to use generative AI tools such as ChatGPT [insert other tools as appropriate]. Please note that you can opt for not using generative AI at all as well to complete all the courses assignments successfully. In the case you opt to use generative AI, you must provide proper citation of the tools you used and describe how you used it (for initial research, preparing outline, editing etc).*

*Although the course allows the use of generative AI, please be aware of the following flaws when using the tools:*

- *Generative AI does not fact check*
- *Generative AI may provide bias and inaccurate answers*
- *Generative AI hallucinates and may provide false or/and made up information*
- *Generative AI does not critically analyzed content*

\*Please note: when allowing students to use GenAI for a course, be aware that some AI applications may cause student concern about cost, security, equity and privacy. Students should not be required to use a technology that is not part of the [UVic learning technology ecosystem](#). Consider offering students a choice to opt-out by offering alternative options.