Centre for International Governance Innovation

Digital Policy Hub

Digital Policy Hub – Working Paper

Generative AI Policy in Higher Education: A Preliminary Survey

Elia Rasky

Winter 2024 cohort

About the Hub

The Digital Policy Hub at CIGI is a collaborative space for emerging scholars and innovative thinkers from the social, natural and applied sciences. It provides opportunities for undergraduate and graduate students and post-doctoral and visiting fellows to share and develop research on the rapid evolution and governance of transformative technologies. The Hub is founded on transdisciplinary approaches that seek to increase understanding of the socio-economic and technological impacts of digitalization and improve the quality and relevance of related research. Core research areas include data, economy and society; artificial intelligence; outer space; digitalization, security and democracy; and the environment and natural resources.

The Digital Policy Hub working papers are the product of research related to the Hub's identified themes prepared by participants during their fellowship.

About CIGI

The Centre for International Governance Innovation (CIGI) is an independent, non-partisan think tank whose peer-reviewed research and trusted analysis influence policy makers to innovate. Our global network of multidisciplinary researchers and strategic partnerships provide policy solutions for the digital era with one goal: to improve people's lives everywhere. Headquartered in Waterloo, Canada, CIGI has received support from the Government of Canada, the Government of Ontario and founder Jim Balsillie.

Partners

Thank you to Mitacs for its partnership and support of Digital Policy Hub fellows through the Accelerate program. We would also like to acknowledge the many universities, governments and private sector partners for their involvement allowing CIGI to offer this holistic research environment.

67 Erb Street West
Waterloo, ON, Canada N2L 6C2
www.cigionline.org

Key Points

- The world of higher education is being transformed by generative artificial intelligence (AI), as instructors, researchers and students begin using this technology for various purposes. If used ethically and responsibly, this technology can enhance teaching, research and learning practices. If used recklessly and unscrupulously, however, it can undermine academic integrity and produce negative educational outcomes.
- Post-secondary educational institutions in Europe and North America have developed and adopted policies to monitor, guide and regulate the use of generative AI among students and faculty members. Under these policies, students must obtain permission from their instructors before using generative AI, and cannot use this technology without rigorous citation and referencing. Individual instructors can establish their own rules, expectations and boundaries around generative AI.
- Post-secondary institutions should introduce new policies to cultivate AI literacy among students and guarantee equal access to generative AI tools. They should also establish democratic governance systems for generative AI.

Introduction

As generative AI has entered the world of higher education, many observers have expressed concerns that this technology will undermine academic integrity and prevent students from achieving their full scholastic potential. Some have pointed out that generative AI tools, such as ChatGPT and Bard, allow students to produce essays and other assignments with very little thought and effort and to cheat on their assignments with virtually no risk of detection and punishment (Marche 2022; Cingillioglu 2023; Cotton, Cotton and Shipway 2023). Others have noted that these tools can be deceptive and misleading, as they often present their users with erroneous (but plausible-sounding) information (Kirwan 2023). Not only do these tools propagate misinformation, but they also provide fake references and citations, making it difficult to verify their claims or trace them back to their original sources (Day 2023). If students use these tools excessively and uncritically, some argue, then they will develop highly distorted and inaccurate views of the world, hurting their intellectual growth. In addition, they will fail to develop important research, writing and analytical thinking skills, hurting their future career prospects. In some cases, their use of these tools may violate academic honesty codes, leading to their suspension or expulsion.

While some observers have warned about the potential dangers of generative AI in higher education, others have highlighted the potential benefits of this technology. Some educators believe that generative AI can improve the quality and accessibility of higher education by making the learning process more flexible, accommodating and intellectually engaging (Houston and Corrado 2023; Laato et al. 2023; Grobe 2023; Fyfe 2023). According to this view, generative AI creates new opportunities for students of all backgrounds to develop their intellectual capacities and form their own academic identities. Students can use generative AI tools to brainstorm ideas and research questions for papers, discover new academic concepts and theories, situate themselves within their disciplines and broaden their world views. Students can also turn to these tools for writing assistance: ChatGPT and Bard can provide students with feedback

on their grammar and syntax, and comment on the clarity of their ideas and the cogency of their arguments. Generative AI is beneficial for instructors as well. Using this technology, instructors can develop lectures, lesson plans and course materials much more easily and efficiently. Instructors may even integrate generative AI tools into their classrooms, thus allowing students to develop strong digital literacy skills.

It is unclear at this point how generative AI will impact higher education in the long-term. As we have seen, this technology can both enhance and hinder post-secondary teaching and learning, depending on how it is adopted and used by instructors and students. Naturally, colleges and universities wish to enjoy the benefits of this technology without compromising academic integrity. To this end, many institutions have developed policies to monitor, guide and regulate the use of generative AI among students and faculty. These policies are subject to ongoing revision and re-evaluation as generative AI continues to evolve and progress technologically. The goal of this working paper is to provide an overview of noteworthy generative AI policies adopted by some post-secondary educational institutions, with a focus on European, American and Canadian institutions. Next, the paper explores how the issues that generative AI presents for higher education have been dealt with in the academic literature. It also seeks to propose new generative AI policies for higher education, drawing upon global case studies and the contemporary academic literature on education and technology.

AI Policies in Higher Education

Most post-secondary institutions in Europe and the United States have developed and adopted broad institution-wide policies on generative AI. For example, the University of Phoenix recently adopted a policy that requires instructors to "become familiar with generative AI tools" and requires students to "disclose when they use generative AI tools in their work" (Lucariello 2023, para. 5). Similarly, Sciences Po, a high-profile university in Paris, recently adopted a policy that punishes students for using generative AI tools "without transparent referencing" (Sciences Po 2023, para. 1). Last year, an educational association in the United Kingdom introduced five principles on generative AI in higher education. These principles are as follows:

1. Universities will support students and staff to become AI-literate.
2. Staff should be equipped to support students to use generative AI tools effectively and appropriately in their learning experience.
3. Universities will adapt teaching and assessment to incorporate the ethical use of generative AI and support equal access.
4. Universities will ensure academic rigour and integrity is upheld.
5. Universities will work collaboratively to share best practice as the technology and its application in education evolves. (Russell Group 2023)

Adhering to these five principles, British universities have adopted policies and strategies to promote AI engagement and literacy among students, while maintaining academic standards of originality, transparency and critical thinking. At Oxford University, professors are advised to teach students about the functions and mechanics

of generative AI, as well as the technical and epistemic limitations of this technology.[1] Meanwhile, at University College London, students are given clear guidelines on the proper uses of generative AI for their academic work.[2] According to these guidelines, students can only use generative AI tools with the express permission of their instructors and program directors. Whenever students use these tools, they must openly acknowledge doing so through citations, bibliographic entries or appendices.[3]

Alongside the broad institution-wide policies that European and American universities have adopted on generative AI, they have also tended to institute policies that allow instructors to set their own rules, boundaries and expectations concerning this technology. In virtually all post-secondary institutions, instructors have the ability to decide whether students in their courses can use generative AI tools and under which conditions. The following statement from the Office of Community Standards at Stanford University is typical:

> Individual course instructors are free to set their own policies regulating the use of generative AI tools in their courses, including allowing or disallowing some or all uses of such tools. Course instructors should set such policies in their course syllabi and clearly communicate such policies to students. Students who are unsure of policies regarding generative AI tools are encouraged to ask their instructors for clarification. (Stanford University Office of Community Standards 2023, para. 5)

Under most institutional policies, instructors can make their own decisions about generative AI, taking into account the learning objectives of their courses and the norms and conventions of their disciplines. If they wish, instructors can adopt a laissez-faire approach to generative AI, allowing their students to use these tools without any limitations. Alternatively, they can adopt a cautious and restrictive approach, only allowing their students to use these tools in certain situations (say, for completing selective assignments).

Post-secondary institutions in Canada have largely embraced generative AI, or at least accepted its increasing use and popularity among instructors and students. Like their European and American counterparts, Canadian institutions allow instructors to experiment with generative AI tools and to incorporate these tools into their teaching practices. They also allow instructors to establish their own generative AI rules and expectations according to their personal preferences and teaching philosophies. For example, at McMaster University, each instructor is expected to "determine if generative AI will be incorporated into course design, activities and assessments" and "clearly communicate to students if and to what extent generative AI is acceptable in the course."[4] In most institutions, instructors are provided with generative AI guides

1 See www.ctl.ox.ac.uk/ai-tools-in-teaching.

2 See www.ucl.ac.uk/students/exams-and-assessments/assessment-success-guide/engaging-ai-your-education-and-assessment.

3 See https://library-guides.ucl.ac.uk/referencing-plagiarism/acknowledging-AI.

4 See https://provost.mcmaster.ca/office-of-the-provost-2/generative-artificial-intelligence/task-force-on-generative-ai-in-teaching-and-learning/provisional-guidelines-on-the-use-of-generative-ai-in-teaching-and-learning/.

to help them understand and navigate this new technology.[5] These guides are often designed by university libraries, teaching centres or professional development organizations. Some guides teach instructors how to take advantage of generative AI, whether by designing assignments and lesson plans with the help of generative AI tools, or by creating in-class exercises that revolve around these tools. Other guides teach instructors how to prevent or minimize the use of generative AI among students.

The Canadian Digital Learning Research Association (CDLRA) is a non-profit research organization that explores how digital technologies are transforming and reshaping Canadian higher education. Every year, the organization conducts a "Pan-Canadian Digital Learning Survey" to understand how Canadian post-secondary institutions are adopting, deploying and regulating new digital technologies. Not surprisingly, the 2023 survey focused heavily on generative AI (Veletsianos 2023). To carry out this survey, the CDLRA sent questionnaires to hundreds of college and university instructors and administrators across Canada. The questionnaires asked participants if their institutions have established any broad policies on generative AI. Over half of the participants (56 percent) were unsure whether their institutions have established such policies or provided contradictory answers to this question. This suggests that many post-secondary institutions in Canada have either not established institution-wide generative AI policies, or have not clearly communicated these policies to instructors, staff and other stakeholders. In either case, stronger leadership and policy initiatives are needed from college and university administration at all levels, including provosts, deans and department chairs. Perhaps colleges and universities should appoint individuals to deal specifically with matters of generative AI. There is already precedence for this in Canada; in fall 2023, Western University appointed its first chief AI officer, whose role is to "develop and implement a university-wide AI strategy that supports Western's academic mission and research objectives" (Ferguson 2023, para. 3).

In most post-secondary institutions, members of the senior administration are responsible for developing institution-wide policies on new technologies, including generative AI. This is the case at the University of Phoenix, for instance, where the chief academic officer and associate provost lead and oversee the AI policy-making process (Business Wire 2023). Students typically have very little input into the design and creation of generative AI policies, even though these policies deeply impact their educational experiences. It should be noted, however, that some universities are allowing students to contribute to the policy-making process. At Stanford University, generative AI policies have been developed by the Board on Conduct Affairs, an advisory committee made up of 15 individuals, including four undergraduate students and two graduate students.[6] Meanwhile, at Harvard University, a group of undergraduate computer science students recently developed a set of AI policy recommendations for the university (Harvard College students and teaching fellows et al. 2023). These students were supported in their efforts by Harvard metaLAB, a science and technology think tank based at the university. In summer 2023, the students' recommendations were adapted into a "Proposed Harvard AI Code of Conduct," which was later presented to the Harvard administration (Harvard College Students and Teaching Fellows et al. 2023).

5 See https://ai.ctlt.ubc.ca/assignment-and-assessment-design-using-generative-ai/; www.dal.ca/dept/clt/e-learning/AI_Resource/communicating-with-your-students.html; www.ualberta.ca/centre-for-teaching-and-learning/teaching-toolkit/teaching-in-the-context-of-ai/suggestions-for-instructors/course-design.html.

6 See https://communitystandards.stanford.edu/resources/about-board-conduct-affairs.

The Academic Literature on Generative AI and Higher Education

When ChatGPT was released to the public on November 30, 2022, it immediately gained the attention of the global academic community. Many academics realized that ChatGPT and other generative AI tools have the potential to change every aspect of academic life, from teaching and student evaluation to scholarly research and writing. Very quickly, books and articles were written on generative AI in relation to pedagogy, student learning, the pursuit of knowledge, academic integrity and academic creativity. Most of these works argue that generative AI is a boon to academia and higher education, not a threat or nuisance (Houston and Corrado 2023; Grobe 2023; Laato et al. 2023; Ward et al. 2024). The authors suggest that this technology can reinvigorate teaching and learning practices and open up new avenues for scholarly inquiry and thought. Moreover, they claim that post-secondary institutions now have a responsibility to introduce students to generative AI and help them become "AI literate." AI literacy is defined as the ability to understand and navigate generative AI tools, analyze and critique the outputs of these tools and harness these outputs responsibly and ethically. It also means the ability to view generative AI within its social, cultural, economic and political context (Dianova and Schultz 2023). If students do not possess AI literacy, it is argued, then they will be woefully unprepared for the economy and labour market of the future, which will hinder their participation in leading industries (Dobrin 2023).

Over the past two years, many university instructors have tried to cultivate AI literacy among their students through innovative in-class exercises and activities, and some have documented these efforts in educational journals. One such instructor is Adrian Kirwan, a professor of history at Maynooth University. Kirwan teaches an undergraduate course titled "Critical Skills," which helps first-year students develop their capacities for research, writing and critical thinking. During the spring 2023 semester, Kirwan asked his students to read and analyze a short essay and accompanying reading list on the 1845–1852 Irish famine (Kirwan 2023). Both the essay and reading list were generated by ChatGPT — a fact that was made clear to the students. As the exercise unfolded, the students discovered that the essay contained many factual errors and that the reading list contained many fake or non-existent sources. Through this experience, the students learned that ChatGPT is capable of spreading falsehoods and should be approached with a skeptical and critical mind. Another instructor who has tried to promote AI literacy is Paul Fyfe, a professor of English at North Carolina State University. Throughout his academic career, Fyfe has explored the sociological and epistemological implications of digital technologies, including generative AI (Fyfe 2016, 2024). In his course "Data and the Human," Fyfe teaches students how to use data and generative AI effectively in their studies and careers and how to think about these technologies from a critical humanities perspective. One of the assignments in the course requires students to write an essay with the help of generative AI tools, and then critically reflect on their experiences (Fyfe 2023). The goal of this exercise is to encourage students to think deeply about the meaning of authorship, creativity, authenticity and academic integrity in an age of generative AI.

Sidney I. Dobrin (2023), an English professor at the University of Florida, recently wrote a paper exploring the impact of AI on higher education and offering specific policy recommendations to align AI systems with educational goals. One of his recommendations is that colleges and universities establish codes of best practice (or codes of conduct) for generative AI, and that these codes be developed collectively by students, instructors, librarians, academic advisers and other stakeholders. He also recommends that post-secondary institutions ensure that all students have access to generative AI tools. As generative AI becomes integral to higher education, students who do not have access to this technology will be extremely disadvantaged and will not derive the full benefit from their studies. It should be noted that some students have had easier access to digital technologies (computers, high-speed internet, software) than others due to socio-economic inequalities (Kleinman 2001). Scholars refer to this phenomenon as the "digital divide." The advent of generative AI may worsen the digital divide if post-secondary institutions do not take steps to guarantee equal access to this technology.

Recommendations

This working paper has examined existing generative AI policies at post-secondary educational institutions in Europe, the United States and Canada. It has also examined various academic works on generative AI in higher education. This review of the AI policy landscape and the academic literature on AI in education has informed the following AI policy recommendations. These recommendations seek to help post-secondary institutions manage and regulate generative AI more effectively, fairly and democratically.

- **AI governance bodies**: Post-secondary institutions should establish new governance bodies dedicated to learning about generative AI, developing generative AI policies and codes of best practice, and informing stakeholders about these policies and codes. These bodies should consist of administrative officials at all levels (provosts, deans, department chairs and academic integrity officers), faculty members (both contract and permanent), students (both undergraduate- and graduate-level) and librarians. While developing generative AI policies, these bodies should consider the views and opinions of all academic community members (especially students) and solicit public feedback through online surveys and in-person town hall meetings. This public engagement would ensure that the AI policy-making process is fair and democratic.

- **Compulsory AI literacy seminars**: All post-secondary institutions should introduce seminars that teach students how to navigate generative AI tools, engage critically with these tools and use them responsibly and ethically. These seminars should be mandatory for all first-year students, regardless of their academic discipline. Experts on AI, academic writing and academic ethics should lead the seminars, or at least participate as guest lecturers. During the seminars, instructors should present students with basic technical information about generative AI and answer students' questions about this technology. Students should engage hands-on with generative AI tools; for example, they should practise generating prompts, critiquing and verifying outputs, citing and referencing outputs and documenting interactions. By directly

interacting with generative AI, students can experience firsthand the benefits of this technology, as well as the technical challenges and ethical risks it raises. Once students have completed the seminars, they would receive AI certificates, which would appear permanently on their student records.

- **Limits on student use**: Students should be forbidden from using generative AI tools for any purposes until they have passed the mandatory AI literacy seminars and received their certificates. If a student is suspected of violating this policy, they should be subjected to an investigation, which may be conducted by either instructors or academic integrity officers. During the investigation, the student in question must demonstrate that they produced their work without the aid of generative AI. To do this, they must explain each step of their writing process, from the brainstorming of their initial ideas to the editing of their final draft. If the student cannot prove the originality of their work, then they should be charged with academic misconduct and face punitive measures, such as a failing grade or temporary suspension.
- **Generative AI tool subscriptions**: Most generative AI tools, such as ChatGPT, Bard and Stable Diffusion, are currently available to the public at no cost. In the future, however, these tools may only be available to paid subscribers; should this be the case, post-secondary institutions should invest in institutional subscriptions, so that all students may have access to them, just as they currently have access to academic journal and research database subscriptions through their institutional affiliations. If institutions do not subscribe to these AI tools, then only privileged students will have access to them, thus widening the digital divide. Of course, it would not be feasible for institutions to subscribe to all generative AI tools, given the very large (and growing) number of them in existence; some careful selection and curation would therefore be necessary. It is important that institutions only subscribe to tools that are reliable and trustworthy and provide significant value for multiple academic disciplines. Perhaps special committees could be created to assess the quality and educational utility of generative AI tools and decide which of them are worthy of subscription.

Conclusion

Post-secondary institutions in Europe, the United States and Canada have adopted fairly similar policies on generative AI. Under these policies, students must obtain permission from their instructors before using generative AI and cannot use this technology without rigorous citation and referencing. Instructors can exercise considerable discretion over the deployment of generative AI; they can choose whether to use generative AI tools for lesson planning and course design and whether to enable, ban or limit the use of these tools among their students. University libraries and teaching centres often provide instructors and students with practical guides on generative AI to help them understand and take advantage of this technology. In the future, post-secondary institutions must adopt more comprehensive and robust policies on generative AI, with a particular focus on promoting AI literacy and guaranteeing equal access to generative AI tools. Institutions must also establish democratic AI governance systems that empower students. The policies and initiatives recommended in this paper are a good starting point.

Acknowledgements

I would like to thank Daniel Cohn and Maroussia Lévesque for their insightful and constructive feedback on my paper.

About the Author

Elia Rasky is a doctoral candidate at York University and a Digital Policy Hub doctoral fellow. His research interests include Canadian politics, global political economy and science and innovation policy. His Hub research will explore the role of academics, business associations and civil society actors in the development of AI policies and regulations in Canada.

Works Cited

Business Wire. 2023. "University of Phoenix Announces New Generative AI Philosophy and Academic Guidance." Business Wire, September 8. www.businesswire.com/news/home/20230908678696/en/University-of-Phoenix-Announces-New-Generative-AI-Philosophy-and-Academic-Guidance.

Cingillioglu, Ilker. 2023. "Detecting AI-generated essays: the ChatGPT challenge." *International Journal of Information and Learning Technology* 40 (3): 259–68. https://doi.org/10.1108/IJILT-03-2023-0043.

Cotton, Debby R. E., Peter A. Cotton and J. Reuben Shipway. 2023. "Chatting and cheating: Ensuring academic integrity in the era of ChatGPT." *Innovations in Education and Teaching International* 61 (2): 228–39. https://doi.org/10.1080/14703297.2023.2190148.

Day, Terence. 2023. "A Preliminary Investigation of Fake Peer-Reviewed Citations and References Generated by ChatGPT." *Professional Geographer* 75 (6): 1024–7. https://doi.org/10.1080/00330124.2023.2190373.

Dianova, Vera G. and Mario D. Schultz. 2023. "Discussing ChatGPT's implications for industry and higher education: The case for transdisciplinary and digital humanities." *Industry and Higher Education* 37 (5): 593–600. https://doi.org/10.1177/09504222231199989.

Dobrin, Sidney I. 2023. *Talking about Generative AI: A Guide for Educators*. Guelph, ON: Broadview Press. https://sites.broadviewpress.com/ai/talking/.

Ferguson, Keri. 2023. "Western appoints Mark Daley as first-ever chief AI officer." *Western News*, September 27. https://news.westernu.ca/2023/09/western-appoints-daley-chief-ai- officer/.

Fyfe, Paul. 2016. "An Archaeology of Victorian Newspapers." *Victorian Periodicals Review* 49 (4): 546–77. www.jstor.org/stable/26166577.

– – –. 2023. "How to cheat on your final paper: Assigning AI for student writing." *AI & Society* 38 (1): 1395–405. https://doi.org/10.1007/s00146-022-01397-z.

– – –. 2024. *Digital Victorians*. Stanford, CA: Stanford University Press.

Grobe, Christopher. 2023. "Why I'm Not Scared of ChatGPT: The limits of the technology are where real writing begins." *The Chronicle of Higher Education*, January 18. www.chronicle.com/article/why-im-not-scared-of-chatgpt.

Harvard College Students and Teaching Fellows, David Atherton, Sarah Newman and Kathleen Esfahany. 2023. “Proposed Harvard AI Code of Conduct.” Harvard University metaLAB, July 11. https://aicodeofconduct.mlml.io/.

Houston, Aileen B. and Edward M. Corrado. 2023. “Embracing ChatGPT: Implications of Emergent Language Models for Academia and Libraries.” *Technical Services Quarterly* 40 (2): 76–91. https://doi.org/10.1080/07317131.2023.2187110.

Kirwan, Adrian. 2023. “ChatGPT and university teaching, learning and assessment: some initial reflections on teaching academic integrity in the age of Large Language Models.” *Irish Educational Studies*: 1–18. https://doi.org/10.1080/03323315.2023.2284901.

Kleinman, Sharon S. 2001. “Understanding The Digital Divide: Implications for College Teaching.” *Transformations: The Journal of Inclusive Scholarship and Pedagogy* 12 (2): 51–67. www.jstor.org/stable/43587155.

Laato, Samuli, Benedikt Morschheuser, Juho Hamari and Jari Björne. 2023. “AI-Assisted Learning with ChatGPT and Large Language Models: Implications for Higher Education.” *2023 IEEE International Conference on Advanced Learning Technologies*. 226–30. https://doi.org/10.1109/ICALT58122.2023.00072.

Lucariello, Kate. 2023. “University of Phoenix Releases Generative AI Philosophy and Academic Guidance.” *Campus Technology*, September 27. https://campustechnology.com/articles/ 2023/09/27/university-of-phoenix-releases-generative-ai-philosophy-and-academic-guidance.aspx.

Marche, Stephen. 2022. “The College Essay Is Dead.” *The Atlantic*, December 6. www.theatlantic.com/technology/archive/2022/12/chatgpt-ai-writing-college-student-essays/672371/.

Russell Group. 2023. “Russell Group principles on the use of generative AI tools in education.” https://russellgroup.ac.uk/media/6137/rg_ai_principles-final.pdf.

Sciences Po. 2023. “Sciences Po Bans The Use Of ChatGPT Without Transparent Referencing.” Press release, January 27. https://newsroom.sciencespo.fr/sciences-po-bans-the-use-of-chatgpt/.

Stanford University Office of Community Standards. 2023. “Generative AI Policy Guidance.” February 16. https://communitystandards.stanford.edu/generative-ai-policy-guidance.

Veletsianos, George. 2023. *Generative Artificial Intelligence in Canadian Post-Secondary Education: AI Policies, Possibilities, Realities, and Futures*. CDLRA 2023 AI Report. www.d2l.com/resources/assets/cdlra-2023-ai-report/.

Ward, Doug, Heidi G. Loshbaugh, Alison L. Gibbs, Tim Henkel, Greg Siering, Jim Williamson and Mark Kayser. 2024. “How Universities Can Move Forward With Generative AI in Teaching and Learning.” *Change: The Magazine of Higher Learning* 56 (1): 47–54. https://doi.org/10.1080/00091383.2024.2297635.